Printed 02/26/2001

APPLICATION NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET N
09/576,960	05/24/2000	435	1641	1670-0226

APPLICANT
DAVID W PIPES, CHESTERFIELD, MISSOURI; MARY E DYSZLEWSKI, CREVE COEUR, MISSOURI; ELIZABETH G WEBB, ST. CHARLES, MISSOURI.

CONTINUING DOMESTIC DATA********
VERIFIED

_____

371 (NAT'L STAGE) DATA********
VERIFIED

_____

FOREIGN APPLICATIONS********
VERIFIED

_____

Foreign priority claimed O yes O no 35 USC 119 (a-d) conditions met O yes O no O Met after Allowance Verified and acknowledged _____ _____ Examiner's Name Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDE CLAIMS
	MO	0	32	2

ADDRESS
ROTHWELL FIGG ERNST & MANBECK PC
SUITE 701 E
555 13TH STREET NW
WASHINGTON , DC 20004

TITLE
FORMULATION OF TC AND RE CARBONYL COMPLEXES USING STANNOUS ION AS THE REDUCTANT FOR PERTECHNETATE AND PERRHENATE

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Molly Ceperley Examiner #: 59751 Date: 03/26/04
Art Unit: 1641 Phone Number 308-4239 Serial Number: ~~09/976,760~~ 10/053,612
Mail Box and Bldg/Room Location: CM1-8D15 Results Format Preferred (circle): PAPER DISK E-MAIL

1612

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): See attached bibliographic data sheet.

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please search for the following separately:

① Preparation of the compounds of claim 1 and claims 8.
Terms: facial metal tricarbonyl, $Mn^{99m}Tc$, ^{186}Re, ^{188}Re, permetallate, carbon monoxide, stannous, ligand

② Stannous ion (claim 18) Prefer lyophilized with or without carbon monoxide. See claim 22 for stannous compounds. Please search broadly for all of these. See also, claim 27.

Further terms:
Tc-carbonyl complexes
pertechnetate (TcO_4^-)
Stannous chloride
ligand (monodentate, bidentate, tridentate)
Tricarboxylate
reducing agent
facial metal ~~oxide~~ carbonyl

synonyms: DTPA, EDTA, triazacyclononanetriacetate, DTA, IDA, NTA

Point of Contact:
Susan Hanley
Technical Info. Specialist
CM1 12C14 Tel: 305-4053

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: H. Long	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: 3/5	Bibliographic _____	Dr.Link _____
Date Completed: 3/13	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

PTO-1590 (1-2000)

Considered
06/29/01
MEC

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=> d bib abs hitstr l26 1

L26  ANSWER 1 OF 12  HCAPLUS  COPYRIGHT 2001 ACS
AN   2001:12467  HCAPLUS
DN   134:91106
TI   Group (VII) transition-metal complexes with multidentate
     aminopolycarboxylate ligands and a kit for producing them
IN   Dyszlewski, Mary M.; Alberto, Roger; Bugaj, Joseph E.
PA   Mallinckrodt Inc., USA
SO   PCT Int. Appl., 34 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   WO 2001000637      A1    20010104      WO 2000-US17813  20000628
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1999-140989   19990629
AB   The invention relates to novel aminocarboxylate ligands that are suitable
     for complexing with a radionuclide, and are useful as imaging
     agents for diagnostic purposes.  In accordance with the present invention,
     a method of prepg. a compd. of formula (I): fac-[M(CO)3(OH2)3]+, wherein M
     is Mn, 99mTc, 186Re or 188Re, involves reacting a metal in
     permetallate form with carbon monoxide and a reducing agent, wherein a
     mixt. of a basic borate buffer and a reducing agent sol. in water but not
     substantially decompd. by water is solved in a water contg. solvent system
     contg. a soln. of the metal in permanganate, pertechnetate or perrhenate
     form in the presence of carbon monoxide.  The compd. of formula (I) can be
     reacted with a ligand Lx to form a compd. of formula (II):
     fac-[M(CO)3(X)2L1]n, wherein M is as defined above, Lx is a
     multidentate ligand, and n is a charge of the ligand Lx increased
     with one + charge.  The invention also is directed to novel compds., and
     kits for carrying out the disclosed methods.
IT   14133-76-7DP, Technetium 99, complexes with
     aminocarboxylate ligands, biological studies 317322-35-3DP,
     technetium-99 complex 317322-38-6DP,
     technetium-99 complex
     RL: BPR (Biological process); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC
     (Process); USES (Uses)
        (radiopharmaceutical kit for prepg. technetium 99m
        scintigraphic agents)
RN   14133-76-7  HCAPLUS
CN   Technetium, isotope of mass 99 (8CI, 9CI)  (CA INDEX NAME)


99Tc

RN   317322-35-3  HCAPLUS
CN   Yttrate(2-), [N-[2-[[2-[bis[(carboxy-.kappa.O)methyl]amino-
     .kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]-N-[(carboxy-
     .kappa.O)methyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-
     tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic
     (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI)  (CA INDEX NAME)
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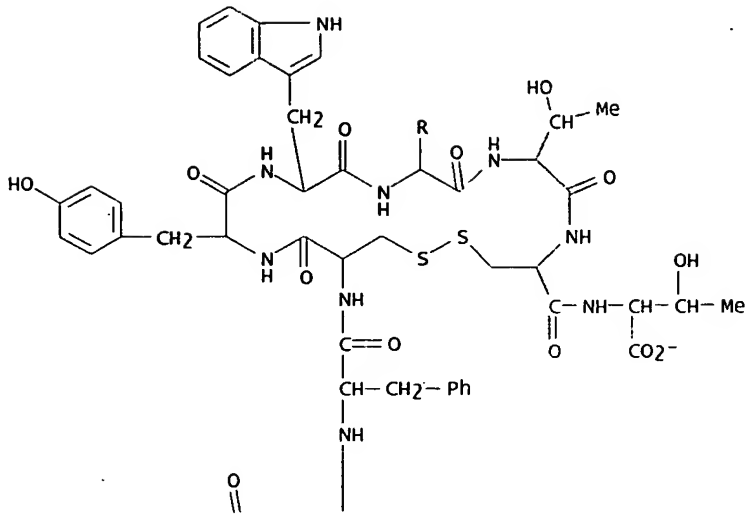
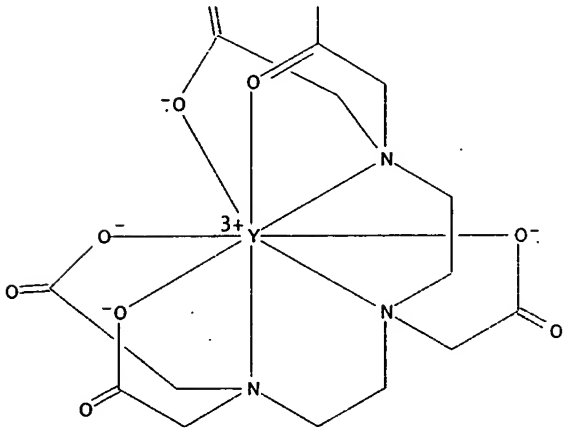
PAGE 1-A



PAGE 2-A



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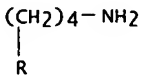
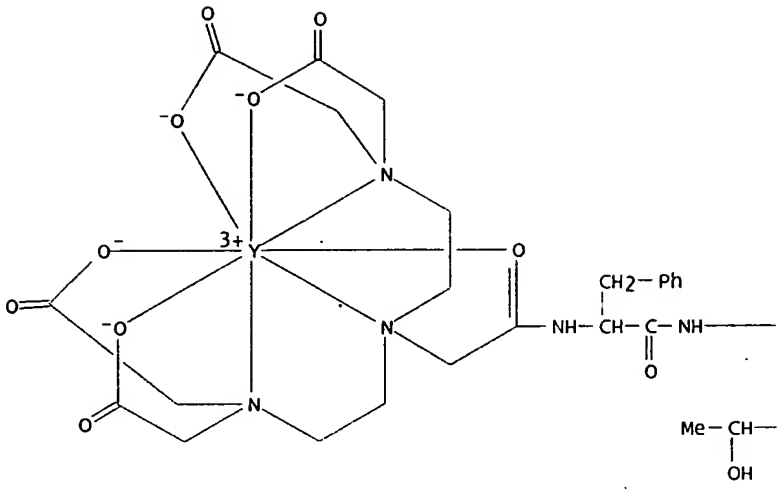


● 2 H^+

RN 317322-38-6 HCAPLUS
CN Yttrate(2-), [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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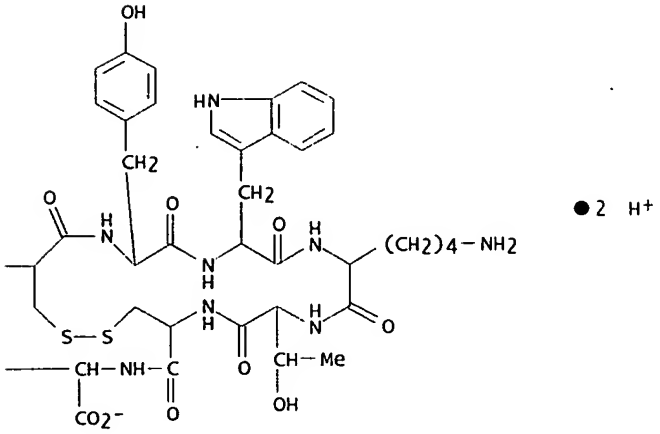
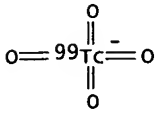


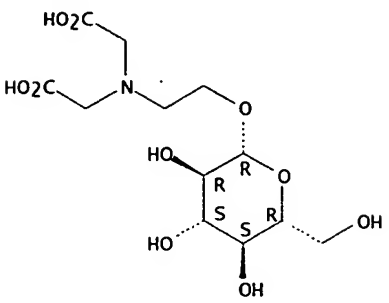
IT 23288-61-1 317321-95-2 317322-35-3
317322-38-6
RL: RCT (Reactant)
(radiopharmaceutical kit for prepg. technetium 99m scintigraphic agents)

RN 23288-61-1 HCAPLUS
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



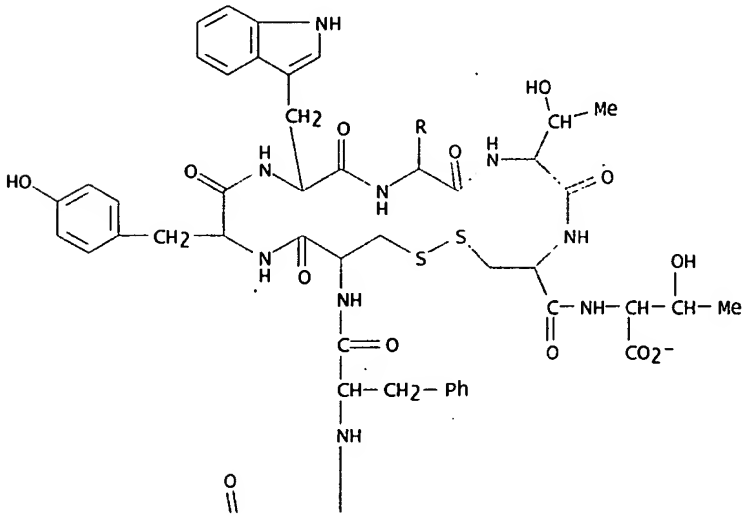
RN 317321-95-2 HCAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-(.beta.-D-glucopyranosyloxy)ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 317322-35-3 HCAPLUS
CN Yttrate(2-), [N-[2-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]-N-[(carboxy-.kappa.O)methyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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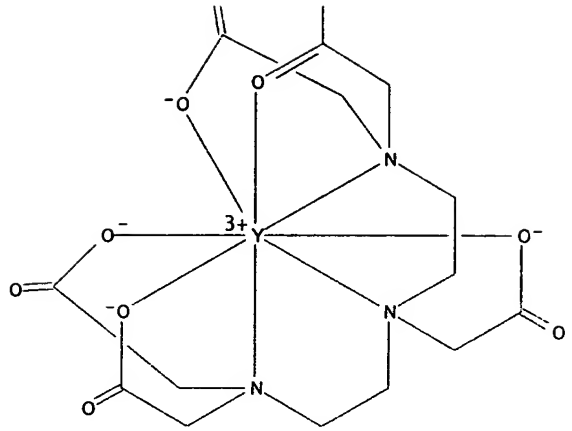

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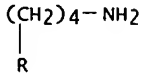
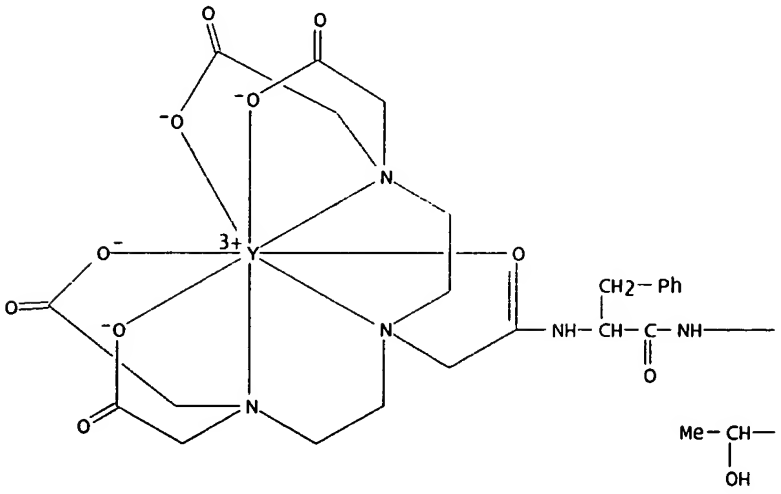
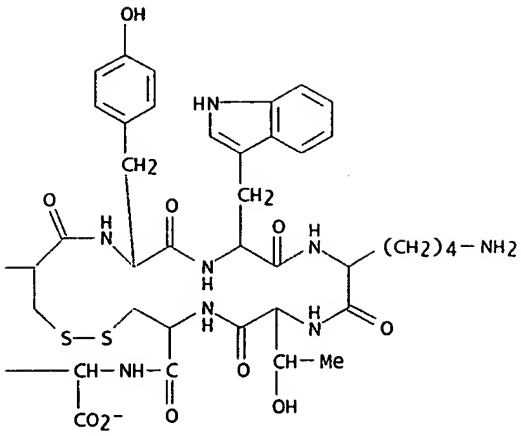


● 2 H+

RN 317322-38-6 HCAPLUS
CN Yttrate(2-), [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycyl-.kappa.N,.kappa.O-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-L-threonine cyclic (3.fwdarw.8)-disulfidato(5-)]-, dihydrogen (9CI) (CA INDEX NAME)

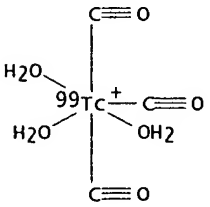
PAGE 1-A





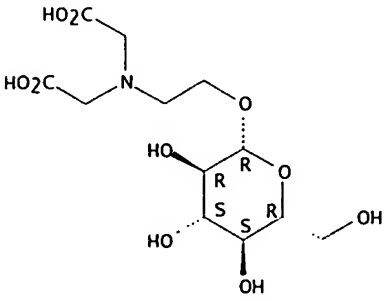
● 2 H^+

IT 163932-31-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(radiopharmaceutical kit for prepg. technetium 99m scintigraphic agents)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



IT 317321-95-2DP, technetium complex
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(radiopharmaceutical kit for prepg. technetium 99m scintigraphic agents)
RN 317321-95-2 HCAPLUS
CN Glycine, N-(carboxymethyl)-N-[2-(.beta.-D-glucopyranosyloxy)ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

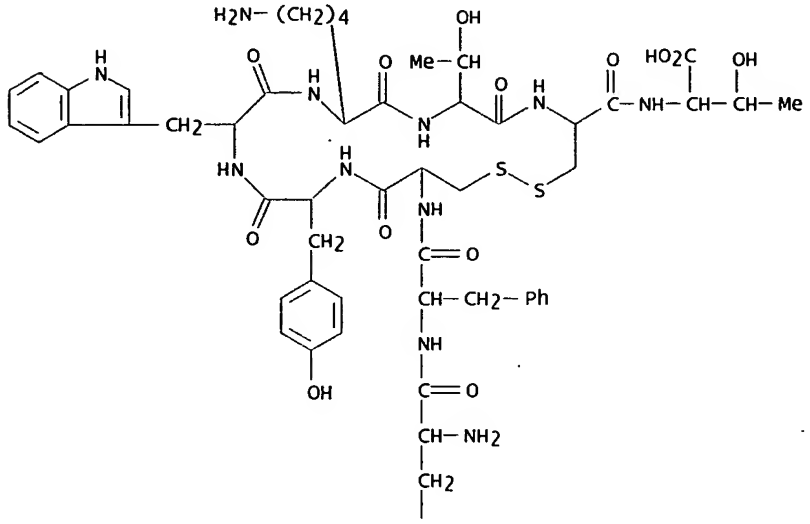


IT 317321-96-3D, technetium-99 complex
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological

study); PROC (Process); USES (Uses)
(radiopharmaceutical kit for prepg. technetium 99m scintigraphic agents for somatostatin-pos. tissues)

RN 317321-96-3 HCAPLUS
CN L-Threonine, D-histidyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl-, cyclic (3.fwdarw.8)-disulfide (9CI) (CA INDEX NAME)

PAGE 1-A



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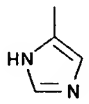
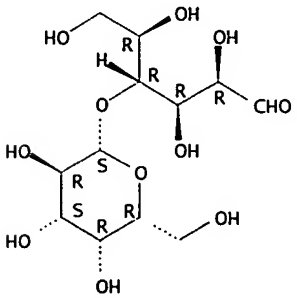


IT 63-42-3, Lactose 87-69-4, L-Tartaric acid
RL: MOA (Modifier or additive use); USES (Uses)
(radiopharmaceutical kits for prepg. imaging agents)

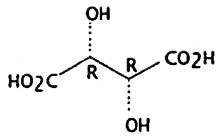
RN 63-42-3 HCAPLUS
CN D-Glucose, 4-O-.beta.-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

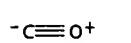


RN 87-69-4 HCAPLUS
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)- (9CI) (CA INDEX NAME)

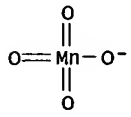
Absolute stereochemistry.



IT 630-08-0, Carbon monoxide, reactions 14333-13-2, Permanganate 87552-16-7, Rhenate (186ReO41-), (T-4)- 122123-28-8, Rhenate (188ReO41-), (T-4)-
RL: RCT (Reactant)
(radiopharmaceutical kits for prepg. imaging agents)
RN 630-08-0 HCAPLUS
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)



RN 14333-13-2 HCAPLUS
CN Permanganate (MnO41-) (8CI, 9CI) (CA INDEX NAME)



RN 87552-16-7 HCAPLUS
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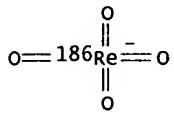

RN 122123-28-8 HCAPLUS
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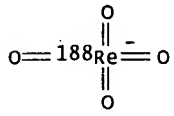
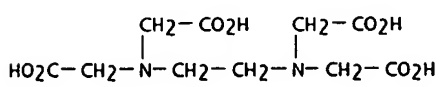
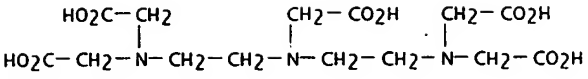


IT 60-00-4D, EDTA, complexes with radionuclides 67-43-6D, DTPA, complexes with radionuclides 139-13-9D, Nitrilotriacetic acid, complexes with radionuclides 142-73-4D, IDA, complexes with radionuclides 7439-96-5D, Manganese, complexes with aminocarboxylate ligands 14378-26-8D, Rhenium 188, complexes with aminocarboxylate ligands, biological studies 14998-63-1D, Rhenium 186, complexes with aminocarboxylate ligands, biological studies 56491-86-2D, complexes with radionuclides 60239-18-1D, DOTA, complexes with radionuclides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(radiopharmaceutical kits for prepg. imaging agents)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA

INDEX NAME)



RN 139-13-9 HCAPLUS
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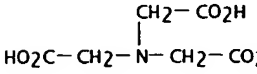
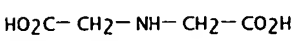


RN 142-73-4 HCAPLUS
CN Glycine, N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

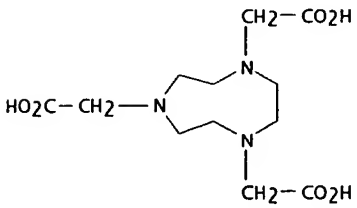
RN 14378-26-8 HCAPLUS
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

^{188}Re

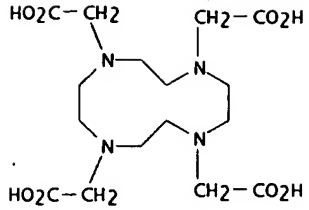
RN 14998-63-1 HCAPLUS
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

^{186}Re

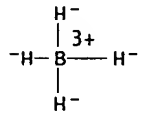
RN 56491-86-2 HCAPLUS
CN 1H-1,4,7-Triazonine-1,4,7-triacetic acid, hexahydro- (9CI) (CA INDEX NAME)



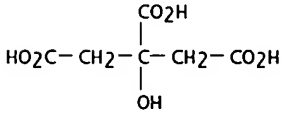
RN 60239-18-1 HCAPLUS
CN 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (9CI) (CA INDEX NAME)



IT 13762-51-1, Potassium tetrahydroborate
RL: RCT (Reactant)
(reducing agents; radiopharmaceutical kits for prepg. imaging agents)
RN 13762-51-1 HCAPLUS
CN Borate(1-), tetrahydro-, potassium (8CI, 9CI) (CA INDEX NAME)



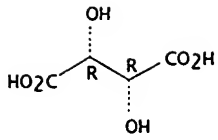
IT 68-04-2, Sodium citrate 141-53-7, Sodium formate
304-59-6, Potassium sodium tartrate
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizing agent; radiopharmaceutical kit for prepg.
technetium 99m scintigraphic agents)
RN 68-04-2 HCAPLUS
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt (9CI) (CA INDEX NAME)



RN 141-53-7 HCAPLUS
CN Formic acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

RN 304-59-6 HCAPLUS
CN Butanedioic acid, 2,3-dihydroxy-, (2R,3R)-, monopotassium monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● K

● Na

RE.CNT 4
RE
(1) Alberto, R; J Am Chem Soc 1998, V120(31), P7987 HCAPLUS
(2) Alberto, R; J Organomet Chem 1995, V493(1-2), P119 HCAPLUS
(3) Roger A; WO 9848848 A 1998 HCAPLUS
(4) Schering AG; EP 1013642 A 2000 HCAPLUS

=> d bib abs hitstr l26 2

L26 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:75472 HCAPLUS
DN 128:189933
TI Novel technetium (III)-Q complexes for functional imaging of multidrug resistance (MDR1) P-glycoprotein
AU Crankshaw, Carolyn L.; Marmion, Mary; Luker, Gary D.; Rao, Vallabhaneni; Dahlheimer, Julie; Burleigh, B. Daniel; Webb, Elizabeth; Deutsch, Karen F.; Piwnica-Worms, David
CS Laboratory of Molecular Radiopharmacology, Mallinckrodt Institute of Radiology, Washington University Medical School, St. Louis, MO, 63110, USA
SO J. Nucl. Med. (1998), 39(1), 77-86
CODEN: JNMEAQ; ISSN: 0161-5505
PB Society of Nuclear Medicine
DT Journal
LA English
AB Overexpression of the multidrug resistance (MDR1) P-glycoprotein (Pgp) correlates with cancer chemotherapeutic failure. Lipophilic cationic radiopharmaceuticals such as 99mTc-sestamibi, 99mTc-tetrofosmin and 99mTc-furifosmin (Tc-Q12) have been validated as transport substrates for the MDR1 Pgp and may enable functional imaging of the MDR phenotype in cancer by observing enhanced washout rates of the tracers in those tumor areas expressing Pgp. To further explore and optimize the Pgp recognition properties of Schiff base phosphine mixed-ligand complexes of the Tc-Q series of nonreducible (Tc(III) cations, a variety of Tc-Q complexes were synthesized and tested in vitro for recognition as transport substrates by the human MDR1 Pgp. Tracer assays with human drug-sensitive KB-3-1 epidermal carcinoma and MDR KB-8-5 cells expressing nonimmunodetectable and modest levels of MDR1 Pgp, resp., were used to screen and pharmacol. characterize 37 novel 99mTc-Q analogs. The ideal agent should have low nonspecific binding, high distinction in net uptake between drug-sensitive cells and MDR tumor cells, and high enhancement of uptake in resistant cells after treatment with an MDR modulator, indicating selective blockade of Pgp-mediated efflux of the radiotracer. Three analogs, trans-[5,5'-(1,2-ethanediyldiimino) bis(2-OEt-2-Me-4-penten-3-one)]bis[dimethyl(3-OMe-1-propyl) phosphine]99mTc(III) (99mTc-Q63) and two trans-[bis(methyl-bis(3-OMe-1-propyl)phosphine)] analogs (99mTc-Q57 and 99mTc-Q58) displayed transport distinctions between drug-sensitive and MDR cell lines that were equal to or greater than all previously available agents. Cyclosporin A, an MDR modulator, had no significant effect in KB-3-1 cells for these 99mTc-complexes but enhanced tracer accumulations in KB-8-5 cells with IC50 values of .apprx.1 .mu.M. In contrast, the non-MDR agents methotrexate and cisplatin had no effect on accumulation of 99mTc-Q complexes and 99mTc-sestamibi in KB-8-5 cells. Technetium-99m-Q57, 99mTc-Q58 and 99mTc-Q63 are avid transport substrates recognized by the human MDR1 Pgp, and have enhanced in vitro properties that may enable functional imaging of Pgp in vivo with improved signal-to-noise ratios and tissue contrast compared to currently available agents.
IT 14133-76-7DP, Technetium 99, complexes, biological studies 129134-13-0P 143049-63-2P 143049-65-4P 144029-16-3P 144125-31-5P 174529-19-2P 174529-31-8P 203566-00-1P 203566-01-2P 203566-02-3P 203566-03-4P 203566-04-5P 203566-05-6P 203566-07-8P 203566-08-9P 203566-09-0P 203566-10-3P 203566-11-4P 203566-12-5P 203566-13-6P 203566-14-7P 203566-15-8P 203566-16-9P 203566-17-0P 203566-18-1P 203566-19-2P 203566-20-5P 203566-21-6P 203566-22-7P 203566-23-8P 203566-24-9P 203566-25-0P 203566-26-1P 203566-27-2P 203566-28-3P 203566-29-4P 203566-30-7P
RL: BPR (Biological process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(technetium 99m complexes for functional imaging of multidrug resistance P-glycoprotein)
RN 14133-76-7 HCAPLUS
CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

^{99}Tc

RN 129134-13-0 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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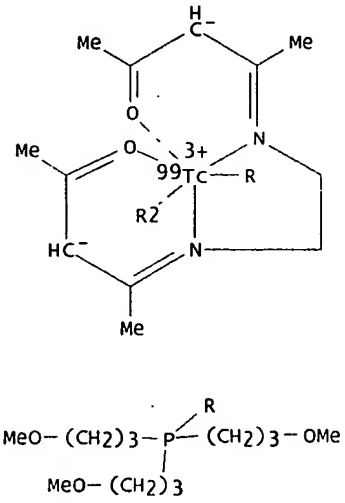

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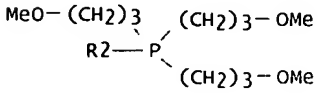
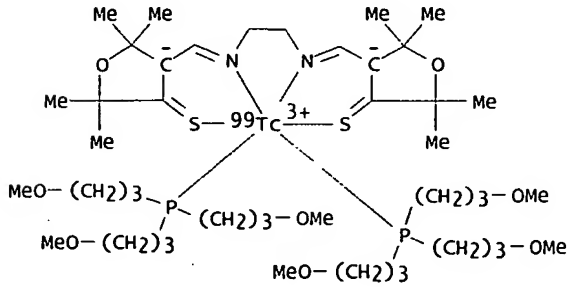
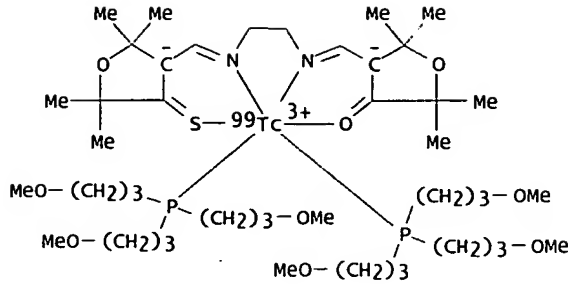


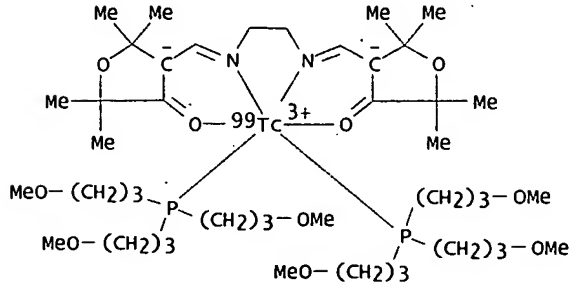
RN 143049-63-2 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-(9CI) (CA INDEX NAME)



RN 143049-65-4 HCAPLUS
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)



RN 144029-16-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)



RN 144125-31-5 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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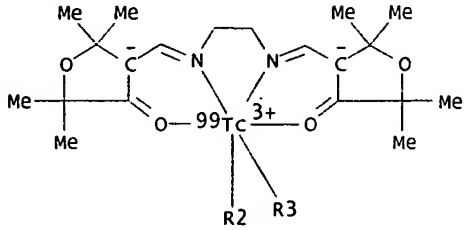

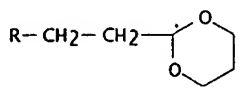

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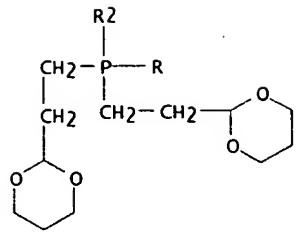

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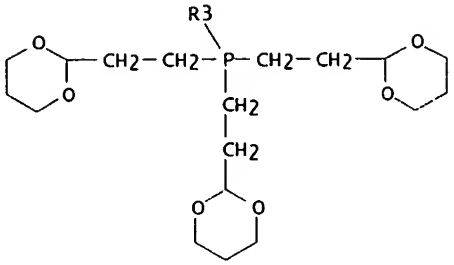
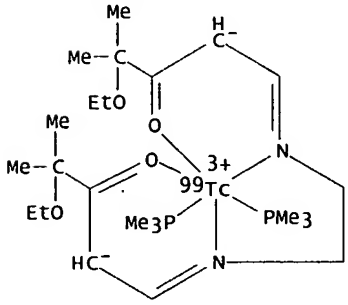
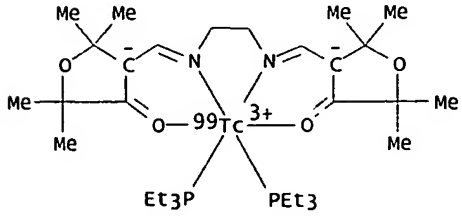


RN 174529-19-2 HCAPLUS
CN Technetium(1+)-99Tc, [4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 174529-31-8 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(triethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-00-1 HCAPLUS
CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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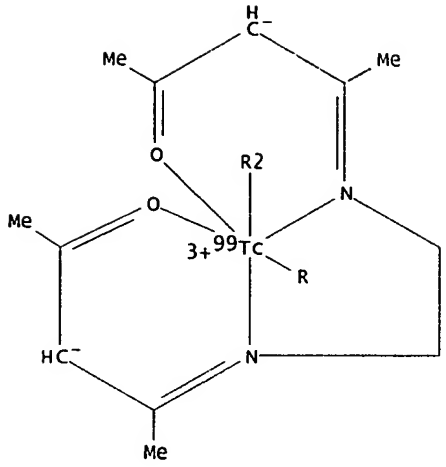

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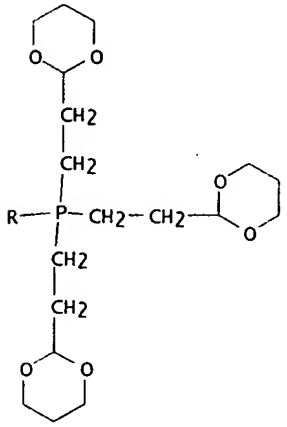

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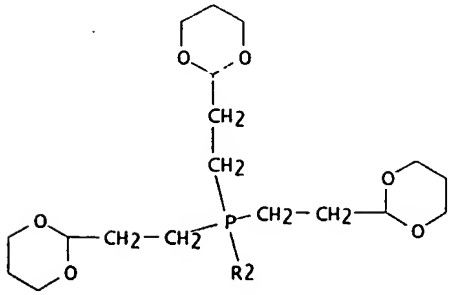

RN 203566-01-2 HCAPLUS
CN Technetium(1+)-99Tc, [3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[

tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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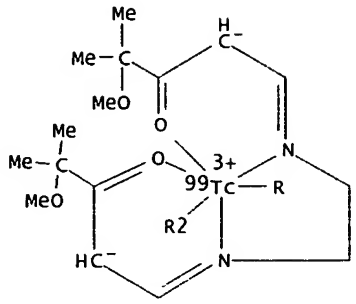

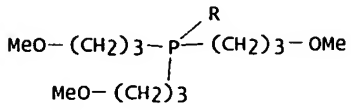

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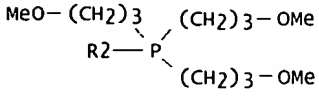

RN 203566-02-3 HCAPLUS

CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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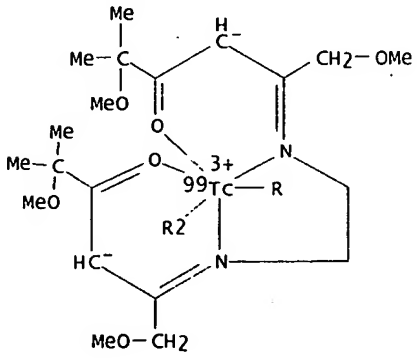

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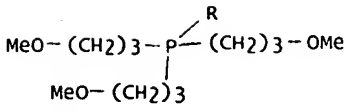

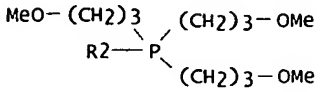

RN 203566-03-4 HCAPLUS
CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris(3-methoxy-3-methylbutyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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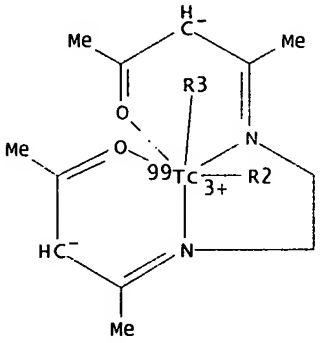

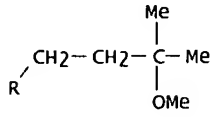

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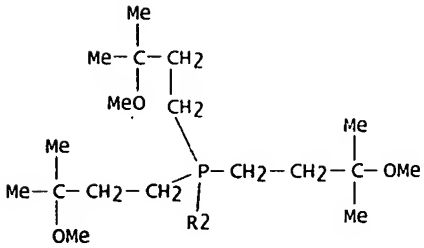

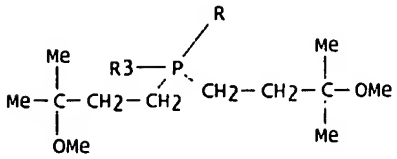

RN 203566-04-5 HCAPLUS
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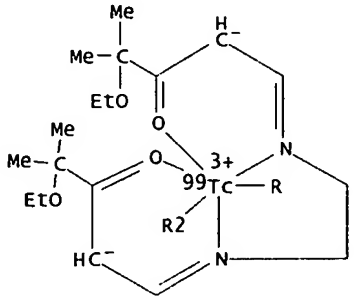

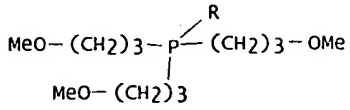

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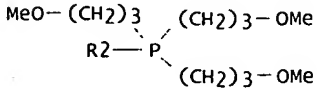
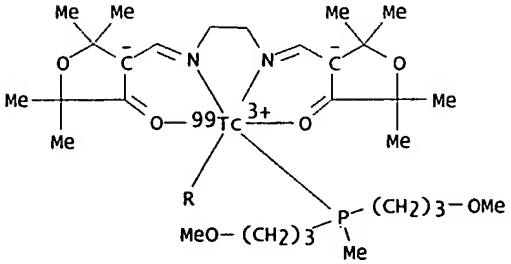
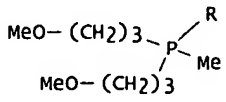


RN 203566-05-6 HCAPLUS
CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-.kappa.P][[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)-(9CI) (CA INDEX NAME)





RN 203566-07-8 HCAPLUS
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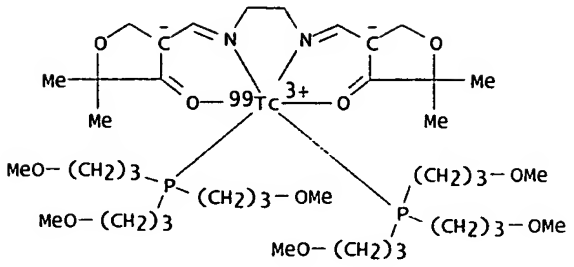
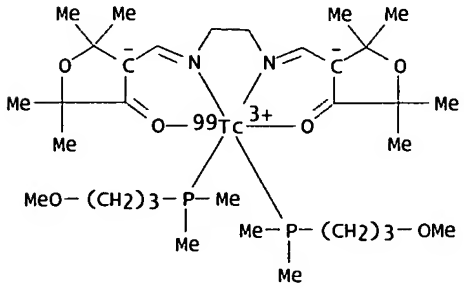
(9CI) (CA INDEX NAME)



RN 203566-08-9 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[(3-methoxypropyl)dimethylphosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-09-0 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[3,3,5,5-tetramethylcyclohexanonato-.kappa.O]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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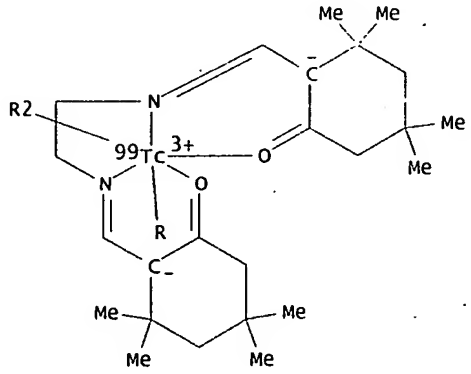

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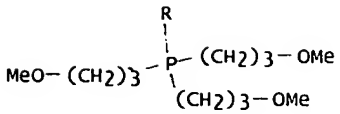
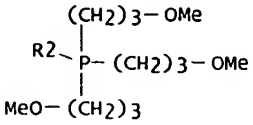
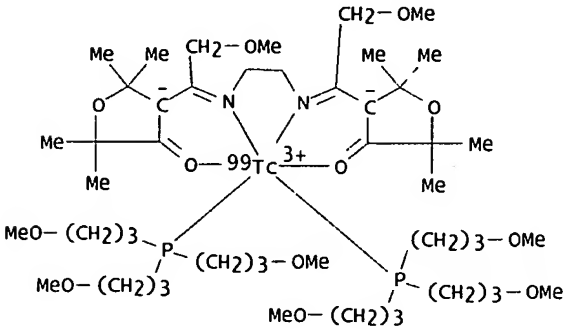




RN 203566-10-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)(2-methoxyethylidyne)]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)



RN 203566-11-4 HCAPLUS
CN Technetium(1+)-99Tc, bis[cyclohexylbis(3-methoxypropyl)phosphine-.kappa.P][[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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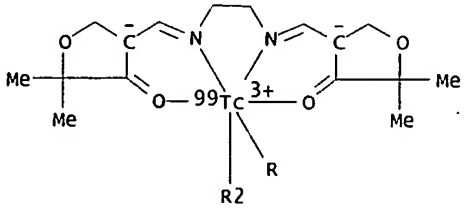

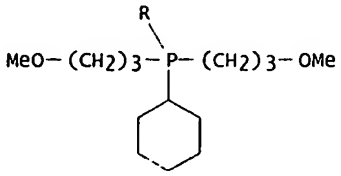

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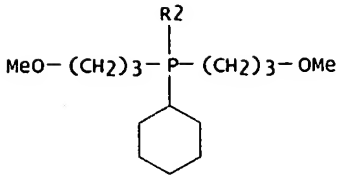

RN 203566-12-5 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)ethylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxy-3-methylbutyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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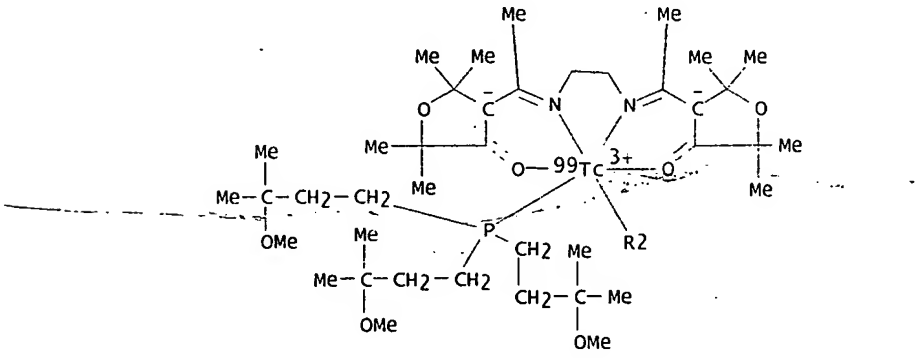

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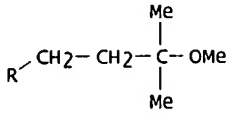
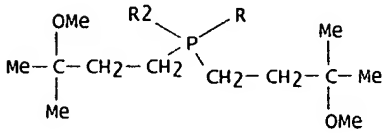
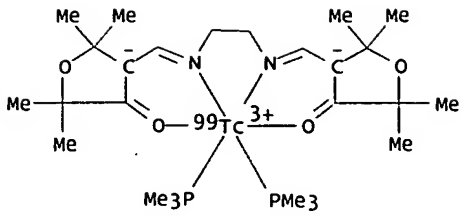




RN 203566-13-6 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-14-7 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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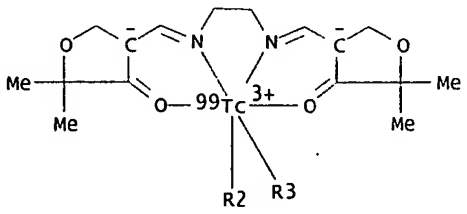

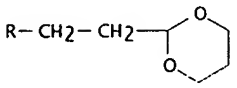

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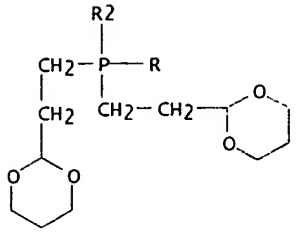

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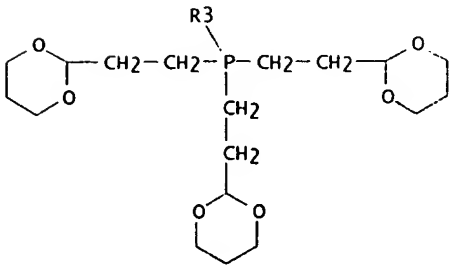

RN 203566-15-8 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-

.kappa.O3]](2-)]bis[tris(3-methoxy-3-methylbutyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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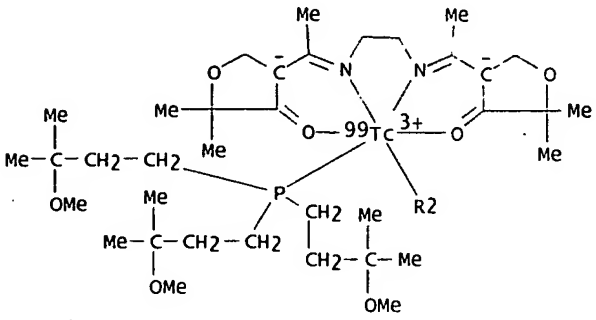

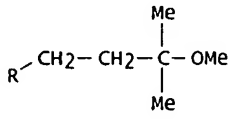

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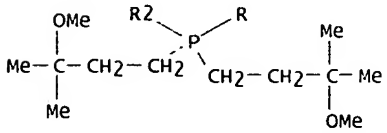

RN 203566-16-9 HCAPLUS
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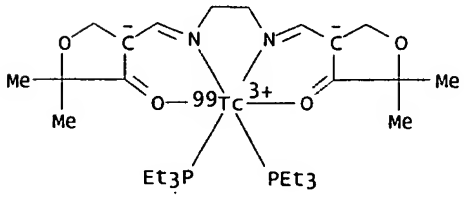
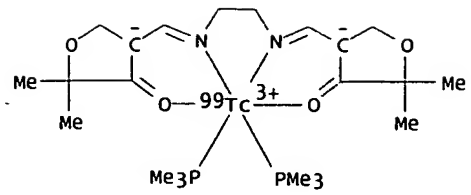


RN 203566-17-0 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-18-1 HCAPLUS
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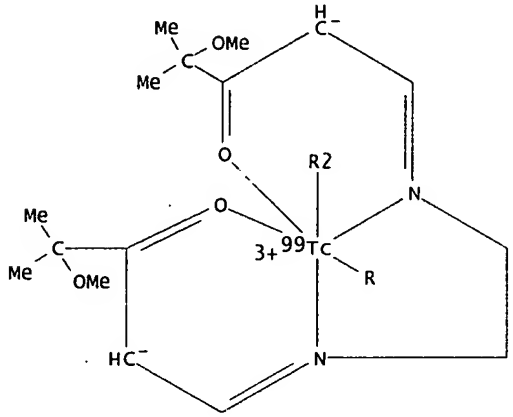

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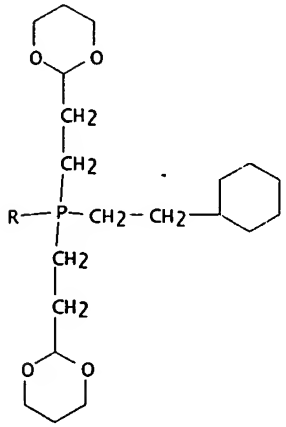

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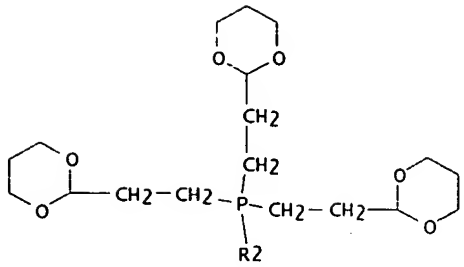

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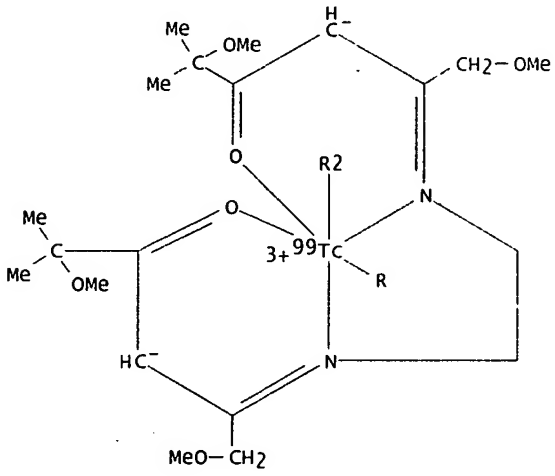

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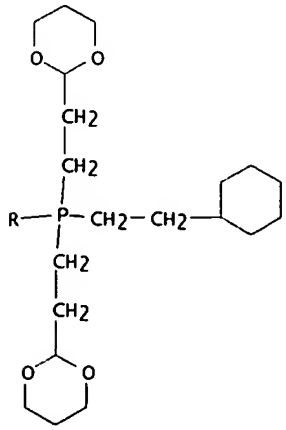

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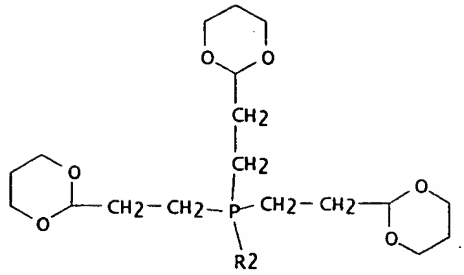
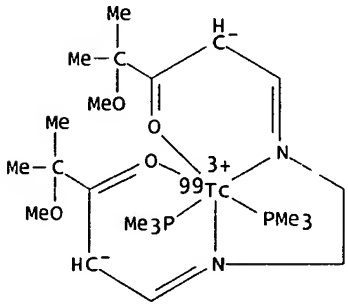
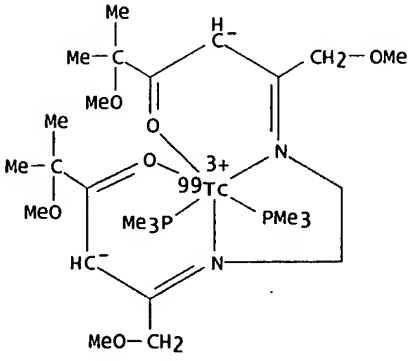


RN 203566-20-5 HCAPLUS
CN Technetium(1+)-99Tc, [3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 203566-21-6 HCAPLUS
CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



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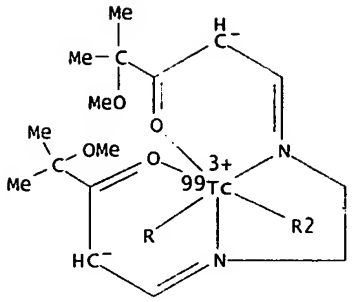

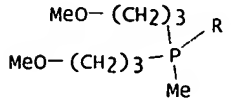

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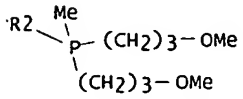

RN 203566-23-8 HCAPLUS
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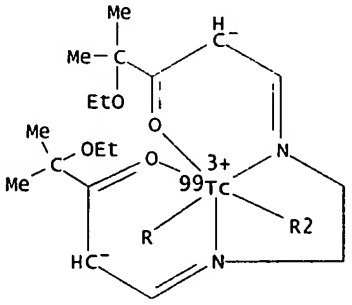

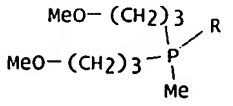

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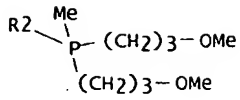

RN 203566-24-9 HCAPLUS
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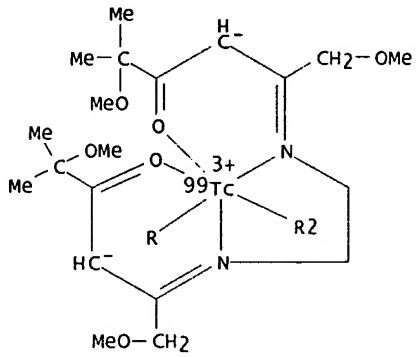

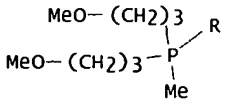

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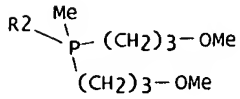

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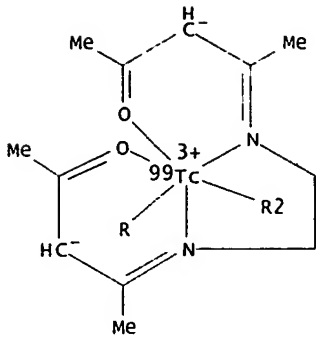

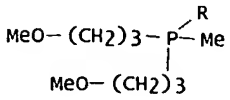

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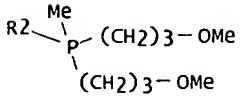
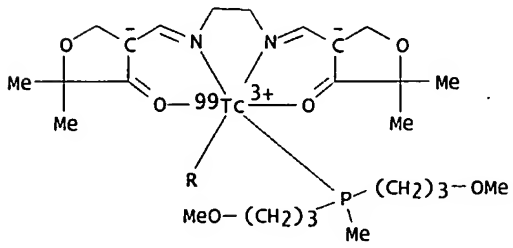
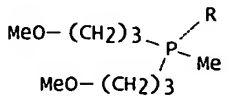


RN 203566-26-1 HCAPLUS
CN Technetium(1+)-99Tc, bis[bis(3-methoxypropyl)methylphosphine-.kappa.P][[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2-dimethyl-3(2H)-furanonato-.kappa.O3]](2-)]-, (OC-6-13)- (9CI) (CA INDEX NAME)





RN 203566-27-2 HCAPLUS
CN Technetium(1+)-99Tc, [6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]bis[(3-methoxypropyl)dimethylphosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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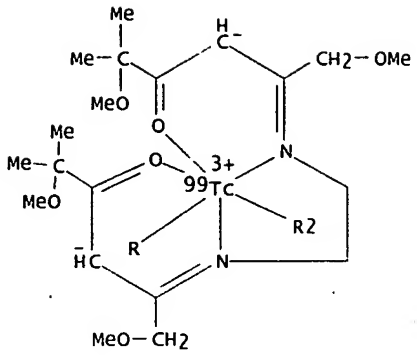

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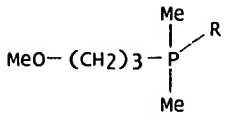

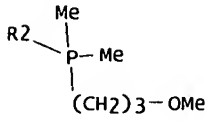

RN 203566-28-3 HCAPLUS
CN Technetium(1+)-99Tc, bis[(3-methoxypropyl)dimethylphosphine-.kappa.P][3,3,14,14-tetramethyl-2,15-dioxa-7,10-diazahexadeca-6,10-diene-4,13-dionato(2-)-.kappa.N7,.kappa.N10,.kappa.O4,.kappa.O13]-, (OC-6-13)-(9CI) (CA INDEX NAME)

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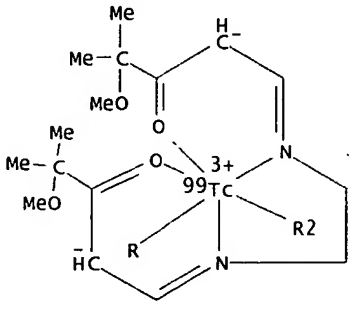

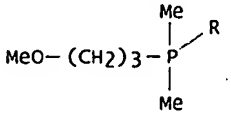

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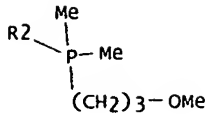

RN 203566-29-4 HCAPLUS
CN Technetium(1+)-99Tc, bis[(3-methoxypropyl)dimethylphosphine-.kappa.P][4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]-, (OC-6-13)-(9CI) (CA INDEX NAME)

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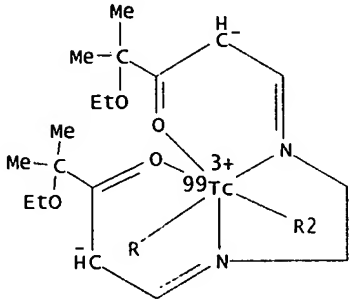

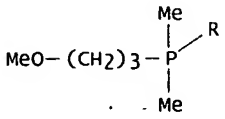

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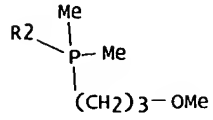

RN 203566-30-7 HCAPLUS
CN Technetium(1+)-99Tc, [[3,3'-[1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[(3-methoxypropyl)dimethylphosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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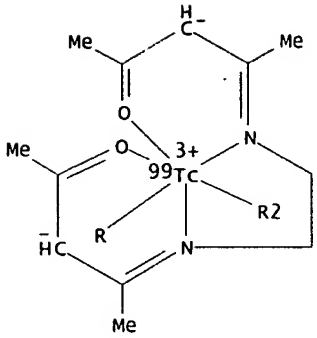

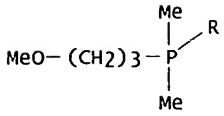

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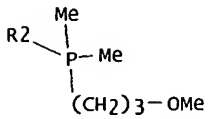
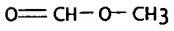
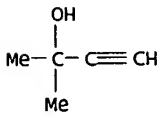


IT 107-31-3 115-19-5 6290-49-9 7719-12-2
, Phosphorous trichloride 23288-61-1, Pertechnetate-99Tc
36865-41-5
RL: RCT (Reactant)
(technetium 99m complexes for functional imaging of
multidrug resistance P-glycoprotein)

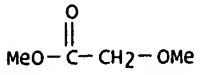
RN 107-31-3 HCAPLUS
CN Formic acid, methyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



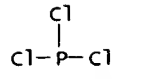
RN 115-19-5 HCAPLUS
CN 3-Butyn-2-ol, 2-methyl- (8CI, 9CI) (CA INDEX NAME)



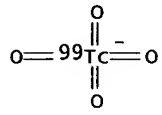
RN 6290-49-9 HCAPLUS
CN Acetic acid, methoxy-, methyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)



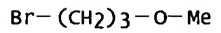
RN 7719-12-2 HCAPLUS
CN Phosphorous trichloride (9CI) (CA INDEX NAME)



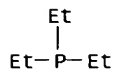
RN 23288-61-1 HCAPLUS
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



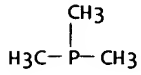
RN 36865-41-5 HCAPLUS
CN Propane, 1-bromo-3-methoxy- (9CI) (CA INDEX NAME)



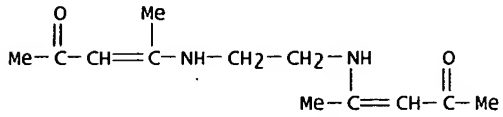
IT 554-70-1P 594-09-2P 7275-44-7P
7740-69-4P 13994-57-5P 36687-98-6P
36687-99-7P 83622-85-9P 142996-66-5P
142996-73-4P 142996-76-7P 142996-85-8P
142996-90-5P 142996-92-7P 142996-93-8P
143785-24-4P 169250-16-2P 203565-94-0P
203565-95-1P 203565-96-2P 203565-97-3P
203565-98-4P 203565-99-5P 203566-31-8P
203566-32-9P 203566-33-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(technetium 99m complexes for functional imaging of multidrug resistance P-glycoprotein)
RN 554-70-1 HCAPLUS
CN Phosphine, triethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



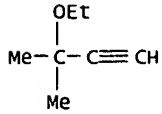
RN 594-09-2 HCAPLUS
CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



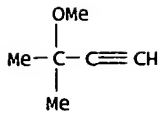
RN 7275-44-7 HCAPLUS
CN 3-Penten-2-one, 4,4'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



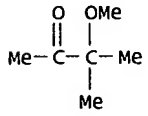
RN 7740-69-4 HCAPLUS
CN 1-Butyne, 3-ethoxy-3-methyl- (9CI) (CA INDEX NAME)



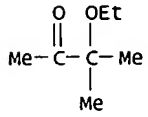
RN 13994-57-5 HCAPLUS
CN 1-Butyne, 3-methoxy-3-methyl- (9CI) (CA INDEX NAME)



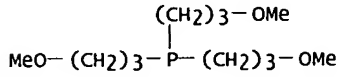
RN 36687-98-6 HCAPLUS
CN 2-Butanone, 3-methoxy-3-methyl- (6CI, 7CI, 9CI) (CA INDEX NAME)



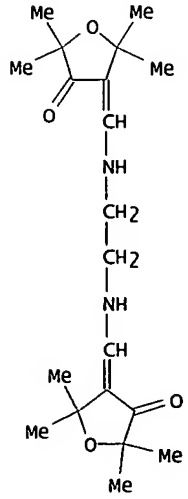
RN 36687-99-7 HCAPLUS
CN 2-Butanone, 3-ethoxy-3-methyl- (6CI, 7CI, 9CI) (CA INDEX NAME)



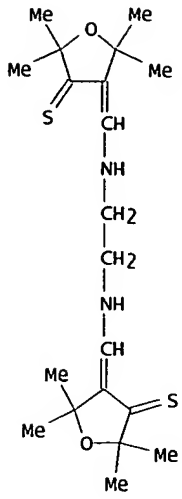
RN 83622-85-9 HCAPLUS
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



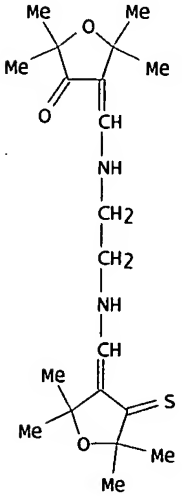
RN 142996-66-5 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



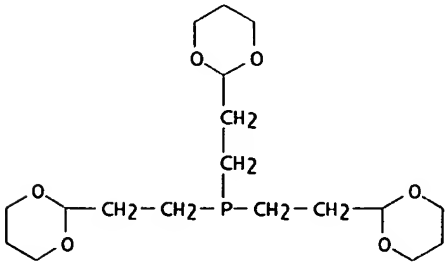
RN 142996-73-4 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



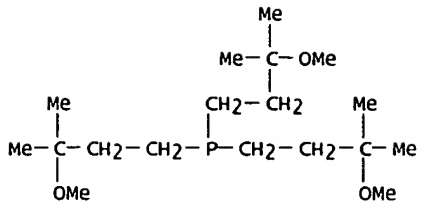
RN 142996-76-7 HCAPLUS
CN 3(2H)-Furanone, 4-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



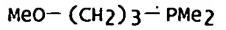
RN 142996-85-8 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



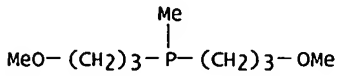
RN 142996-90-5 HCAPLUS
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



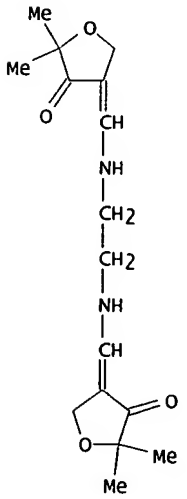
RN 142996-92-7 HCAPLUS
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)



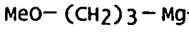
RN 142996-93-8 HCAPLUS
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



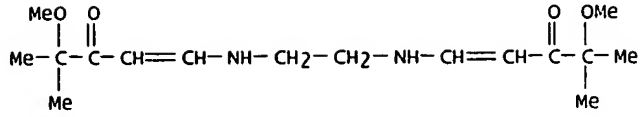
RN 143785-24-4 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



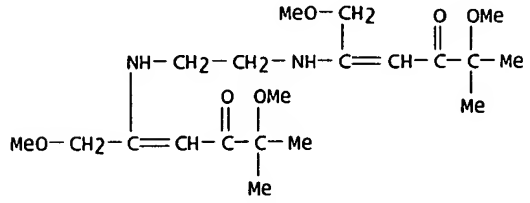
RN 169250-16-2 HCAPLUS
CN Magnesium, bromo(3-methoxypropyl)- (9CI) (CA INDEX NAME)



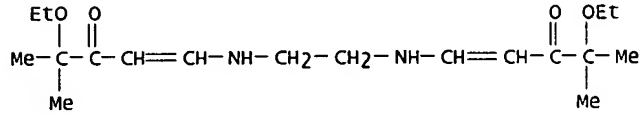
RN 203565-94-0 HCAPLUS
CN 2,15-Dioxa-7,10-diazahexadeca-5,11-diene-4,13-dione, 3,3,14,14-tetramethyl- (9CI) (CA INDEX NAME)



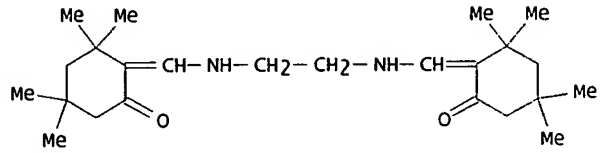
RN 203565-95-1 HCAPLUS
CN 2,15-Dioxa-7,10-diazahexadeca-5,11-diene-4,13-dione, 6,11-bis(methoxymethyl)-3,3,14,14-tetramethyl- (9CI) (CA INDEX NAME)



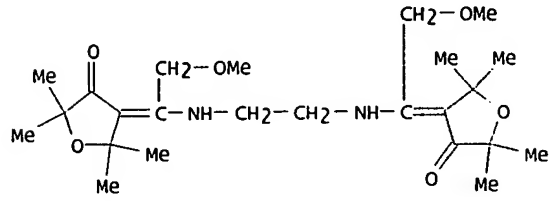
RN 203565-96-2 HCAPLUS
CN 3,16-Dioxa-8,11-diazaoctadeca-6,12-diene-5,14-dione, 4,4,15,15-tetramethyl- (9CI) (CA INDEX NAME)



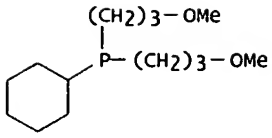
RN 203565-97-3 HCAPLUS
CN Cyclohexanone, 2,2'-[1,2-ethanediylbis(iminomethylidyne)]bis[3,3,5,5-tetramethyl- (9CI) (CA INDEX NAME)



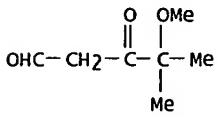
RN 203565-98-4 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis[imino(2-methoxyethylidyne)]]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



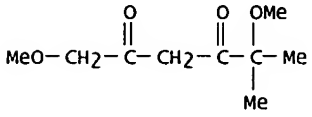
RN 203565-99-5 HCAPLUS
CN Phosphine, cyclohexylbis(3-methoxypropyl)- (9CI) (CA INDEX NAME)



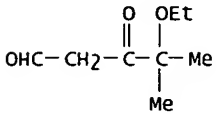
RN 203566-31-8 HCAPLUS
CN Pentanal, 4-methoxy-4-methyl-3-oxo- (9CI) (CA INDEX NAME)



RN 203566-32-9 HCAPLUS
CN 2,4-Hexanedione, 1,5-dimethoxy-5-methyl- (9CI) (CA INDEX NAME)

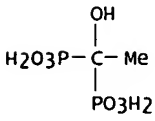


RN 203566-33-0 HCAPLUS
CN Pentanal, 4-ethoxy-4-methyl-3-oxo- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l26 3

L26 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:377784 HCAPLUS
DN 127:43913
TI Studies of the Structure and Composition of Rhenium -1,1-Hydroxyethylidenediphosphonate (HEDP)
AU Elder, R. C.; Yuan, Jie; Helmer, Bella; Pipes, David; Deutsch, Karen; Deutsch, Edward
CS Biomedical Chemistry Research Center Department of Chemistry, University of Cincinnati, Cincinnati, OH, 45221-0172, USA
SO Inorg. Chem. (1997), 36(14), 3055-3063
CODEN: INOCAJ; ISSN: 0020-1669
PB American Chemical Society
DT Journal
LA English
AB Several of analogs of 186Re 1,1-hydroxyethylidenediphosphonic acid (H4HEDP) using nonradioactive Re were prepd. and structurally characterized using EXAFS (extended x-ray absorption fine structure) spectroscopy. One complex synthesized via the substitution reaction of HEDP with trans-[(py)4(O)2Re]Cl in abs. EtOH appears to be the 1:1 salt of the tris-HEDP complex anion with the starting Re cation, [(py)4(O)2Re][Re(H2HEDP)3]. Three other materials, all synthesized via redn. of perrhenate by SnCl2 in the presence of excess H4HEDP ligand, are quite different in structure from the material formed by substitution. The principal difference is that each of these contains Re-Re bonds and is formulated as oligomers. The material with a large excess of reductant has Re-Re bonds of .apprx.2.4 .ANG. and is best modeled as a linear tetramer of Re atoms bridged by HEDP ligands which also bind an equiv. no. of Sn atoms with addnl. HEDP ligands. It is Lix[Re4(OH)2Sn4(HEDP)12]. The material formed with the least amt. of reducing agent is best modeled as a triangular cluster of Re atoms bicapped by two HEDP ligands and bridged to three Sn atoms by HEDP to form a complex Lix[Re3Sn3(HEDP)8]. It also has Re-Re bonds but of a significantly longer distance, .apprx.2.8 .ANG.. A material with an intermediate amt. of reducing agent, prepd. in a manner most closely resembling the medically effective palliative agent, appears to contain a mixt. of these, and perhaps other, oligomers.
IT 2809-21-4DP, rhenium tin polynuclear complexes
7440-15-5DP, Rhenium, tin hydroxyethylidenediphosphonic acid polynuclear complexes 7440-31-5DP, Tin, rhenium hydroxyethylidenediphosphonic acid polynuclear complexes 190247-60-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and mol. structure and EXAFS)
RN 2809-21-4 HCAPLUS
CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



RN 7440-15-5 HCAPLUS
CN Rhenium (8CI, 9CI) (CA INDEX NAME)

Re

RN 7440-31-5 HCAPLUS
CN Tin (8CI, 9CI) (CA INDEX NAME)

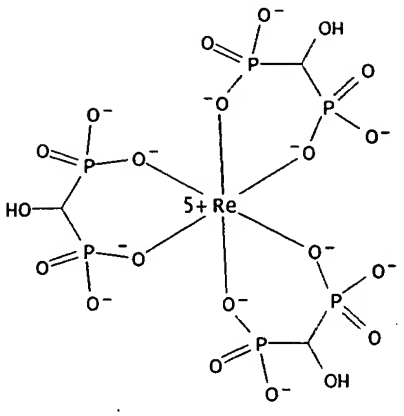
Sn

RN 190247-60-0 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, hydrogen (OC-6-11)-tris[[(hydroxymethylene)bis[phosphonato-.kappa.O]](4-)]rhenate(7-

) (1:6:1) (9CI) (CA INDEX NAME)

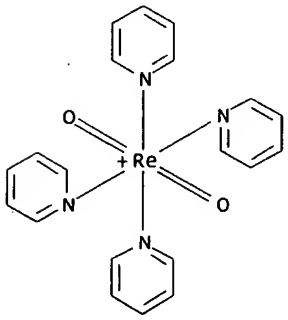
CM 1

CRN 190247-59-7
CMF C3 H6 O21 P6 Re
CCI CCS
CDES 7:OC-6-11

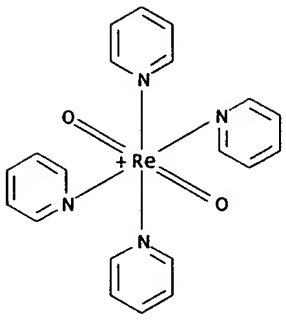


CM 2

CRN 21710-28-1
CMF C20 H20 N4 O2 Re
CCI CCS
CDES 7:OC-6-12

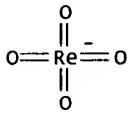


IT 31429-86-4, trans-Dioxotetrakis(pyridine)rhenium(1+)
    chloride
    RL: RCT (Reactant)
    (reaction with hydroxyethylidenediphosphonic acid)
RN 31429-86-4 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, chloride, (OC-6-12)- (9CI) (CA
    INDEX NAME)



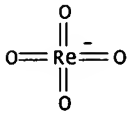
● Cl^-

IT 10466-65-6, Potassium perrhenate 13472-33-8, Sodium perrhenate
RL: RCT (Reactant)
(reaction with hydroxyethylidenediphosphonic acid and stannous chloride)
RN 10466-65-6 HCAPLUS
CN Rhenate (ReO41-), potassium, (T-4)- (9CI) (CA INDEX NAME)



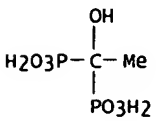
● K^+

RN 13472-33-8 HCAPLUS
CN Rhenate (ReO41-), sodium, (T-4)- (9CI) (CA INDEX NAME)



● Na^+

IT 2809-21-4
RL: RCT (Reactant)
(reaction with perrhenate and stannous chloride or with dioxotetrakis(pyridine)rhenium(1+))
RN 2809-21-4 HCAPLUS
CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



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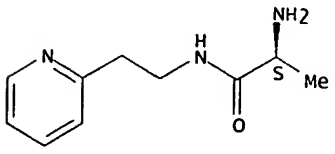
=> d bib abs hitstr l26 4

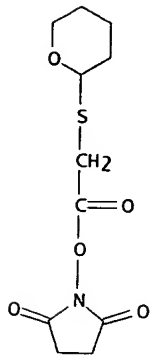
L26 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:299439 HCAPLUS
DN 127:2556
TI Preparation, Characterization, and Biological Evaluation of Technetium(V) and Rhenium(V) Complexes of Novel Heterocyclic Tetradentate N3S Ligands
AU Rajagopalan, Raghavan; Grummon, Glenn D.; Bugaj, Joseph; Hallemann, Lynn S.; Webb, Elizabeth G.; Marmion, Mary E.; Vanderheyden, Jean-Luc; Srinivasan, Ananthachari
CS Mallinckrodt Medical Inc., St. Louis, MO, 63134, USA
SO Bioconjugate Chem. (1997), 8(3), 407-415
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB Various tetradentate N3S ligands which contain pyridyl, morpholino, or imidazolyl moieties were prepd. and labeled with technetium and rhenium. Metal complexation of the ligands occurred efficiently over the pH range from 2 to 11. Ligands possessing the S-THP (tetrahydropyranyl)-protected mercapto group labeled efficiently even under alk. conditions, and among the three types of heterocyclic metal complexes, a marked difference in stability was obsd.; rhenium complexes decompd. to ReO4- whereas technetium complexes decompd. to TcO2/TcO4-. In general, imidazolyl complexes of both technetium and rhenium were very stable in saline; less than 10% decompn. after 24 h. The technetium histidyl complex and technetium pyridyl complex were quite stable even under cysteine challenge; less than 10% decompn. after 24 h. The rhenium and technetium morpholino complexes were very unstable; greater than 10% decompn. after only 1 h in saline and greater than 25% decompn. in 1 h under cysteine challenge. Profound pharmacokinetic differences among these metal complexes were also obsd. in rat biodistribution studies. The neutral pyridyl complexes exhibited high blood and liver uptake and slow clearance from these tissues. The replacement of a hydroxyl group by a carboxyl group, which resulted in an anionic complex at physiol. pH, resulted in a dramatic decrease in blood and liver uptake. The neutral imidazolyl complex exhibited marked redn. in blood uptake and much faster clearance from blood and liver compared to the neutral pyridyl complex. Finally, the anionic histidyl complex, which contains both the imidazolyl and carboxyl groups, had the most favorable pharmacokinetic properties in that it exhibited very low blood, liver, and kidney uptakes and a rapid clearance from the body via the renal system. The combination of the high stability and favorable pharmacokinetic properties of the imidazolyl complexes should render them useful for targeted delivery of the medically important isotopes.
IT 102523-03-5P 121557-45-7P 190122-99-7P
190123-09-2P 190123-20-7P 190123-27-4P
190123-31-0P 190123-37-6P 190123-39-8P
190123-41-2P 190123-44-5P 190123-45-6P
190123-47-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(intermediate; prepn., characterization, and biol. evaluation of Tc(V) and Re(V) complexes of heterocyclic tetradentate N3S ligands for tissue targeting)
RN 102523-03-5 HCAPLUS
CN Propanamide, 2-amino-N-[2-(2-pyridinyl)ethyl]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



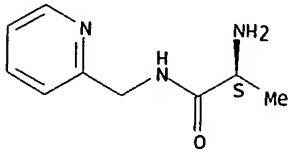
RN 121557-45-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[(tetrahydro-2H-pyran

(9CI) (CA INDEX NAME)



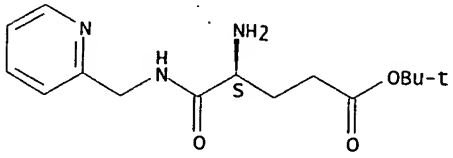
RN 190122-99-7 HCAPLUS
CN Propanamide, 2-amino-N-(2-pyridinylmethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



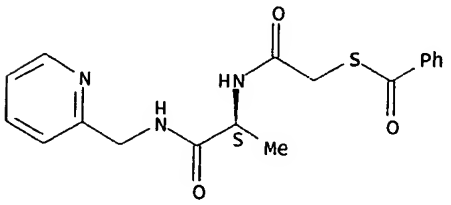
RN 190123-09-2 HCAPLUS
CN Pentanoic acid, 4-amino-5-oxo-5-[(2-pyridinylmethyl)amino]-, 1,1-dimethylethyl ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 190123-20-7 HCAPLUS
CN Benzenecarbothioic acid, S-[2-[[1-methyl-2-oxo-2-[(2-pyridinylmethyl)amino]ethyl]amino]-2-oxoethyl] ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 190123-27-4 HCAPLUS
CN Benzenecarbothioic acid, S-[2-[[1-methyl-2-oxo-2-[[2-(2-pyridinyl)ethyl]amino]ethyl]amino]-2-oxoethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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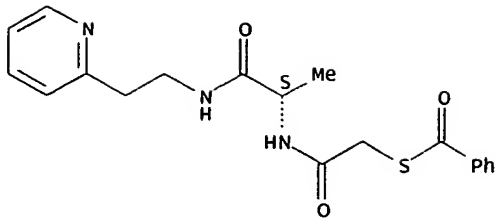
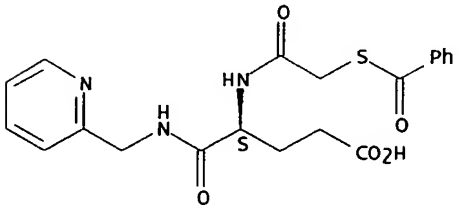


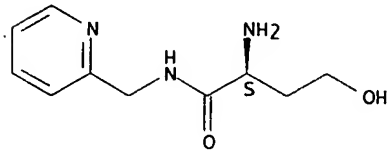
RN 190123-31-0 HCAPLUS
CN Pentanoic acid, 4-[[(benzoylthio)acetyl]amino]-5-oxo-5-[(2-pyridinylmethyl)amino]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



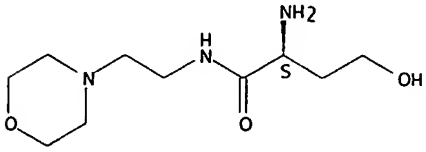
RN 190123-37-6 HCAPLUS
CN Butanamide, 2-amino-4-hydroxy-N-(2-pyridinylmethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



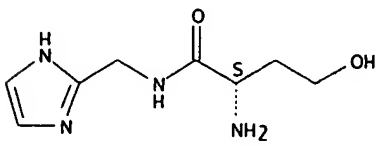
RN 190123-39-8 HCAPLUS
CN Butanamide, 2-amino-4-hydroxy-N-[2-(4-morpholinyl)ethyl]-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 190123-41-2 HCAPLUS
CN Butanamide, 2-amino-4-hydroxy-N-(1H-imidazol-2-ylmethyl)-, (S)- (9CI) (CA INDEX NAME)

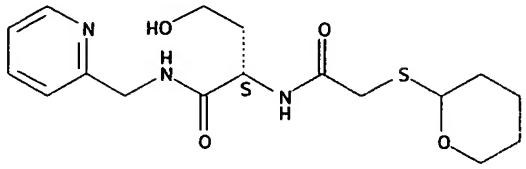
Absolute stereochemistry.



RN 190123-44-5 HCAPLUS
CN Butanamide, 4-hydroxy-N-(2-pyridinylmethyl)-2-[[[(tetrahydro-2H-pyran-2-

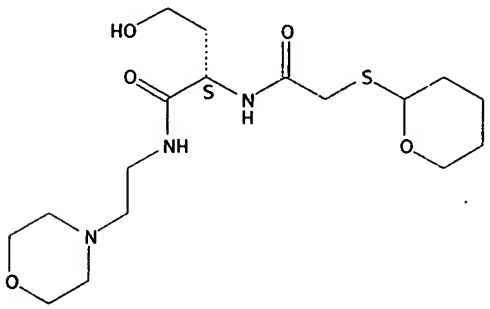
yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



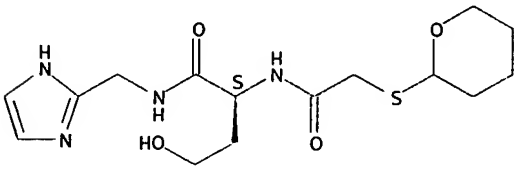
RN 190123-45-6 HCAPLUS
CN Butanamide, 4-hydroxy-N-[2-(4-morpholinyl)ethyl]-2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

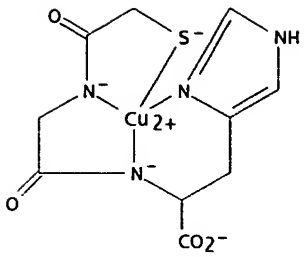


RN 190123-47-8 HCAPLUS
CN Butanamide, 4-hydroxy-N-(1H-imidazol-2-ylmethyl)-2-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]amino]-, [2(S)]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

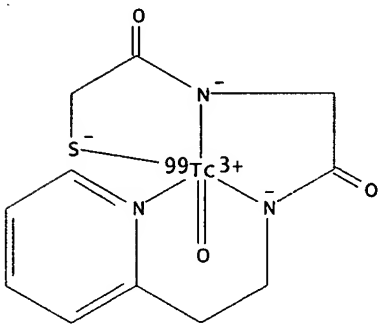


IT 70896-70-7P 128548-76-5P 159737-46-9P
190123-49-0P 190123-52-5P 190123-55-8P
190123-56-9P 190123-58-1P 190123-60-5P
190123-61-6P 190123-62-7P 190123-64-9P
RL: BPR (Biological process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(prepn., characterization, and biol. evaluation of Tc(V) and Re(V) complexes of heterocyclic tetradentate N3S ligands for tissue targeting)
RN 70896-70-7 HCAPLUS
CN Cuprate(2-), [(mercapto-.kappa.S)acetylglycyl-.kappa.N-L-histidinato(4-)-.kappa.N,.kappa.N3]-, dihydrogen, (SP-4-3)- (9CI) (CA INDEX NAME)

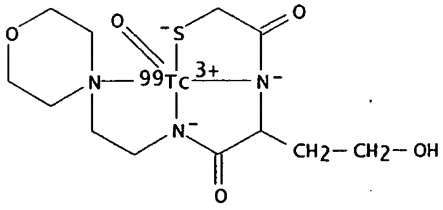


● 2 H^+

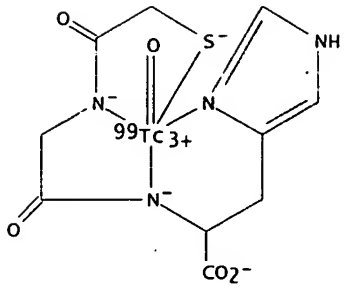
RN 128548-76-5 HCAPLUS
CN Technetium-99Tc, [2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(2-pyridinyl-.kappa.N)ethyl]acetamidato(3-)-.kappa.N]oxo-, (SP-5-25)- (9CI) (CA INDEX NAME)



RN 159737-46-9 HCAPLUS
CN Technetium-99Tc, [4-hydroxy-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(4-morpholinyl-.kappa.N4)ethyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

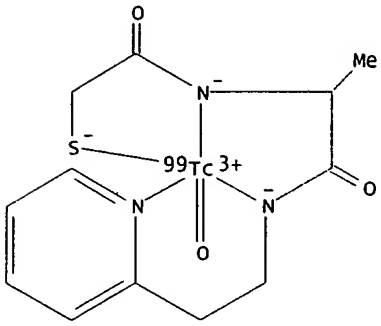


RN 190123-49-0 HCAPLUS
CN Technetate(1-)-99Tc, [(mercapto-.kappa.S)acetylglycyl-.kappa.N-L-histidinato(4-)-.kappa.N,.kappa.N3]oxo-, hydrogen, (SP-5-24)- (9CI) (CA INDEX NAME)

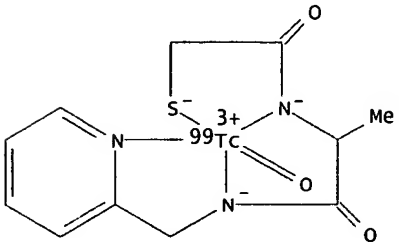


● H^+

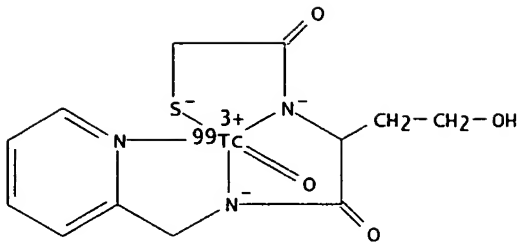
RN 190123-52-5 HCAPLUS
CN Technetium-99Tc, [2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(2-pyridinyl-.kappa.N)ethyl]propanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)



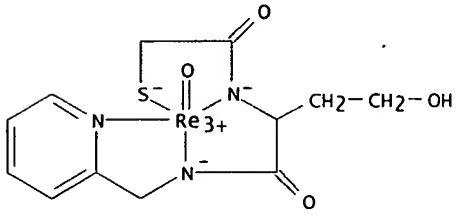
RN 190123-55-8 HCAPLUS
CN Technetium-99Tc, [2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]propanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)



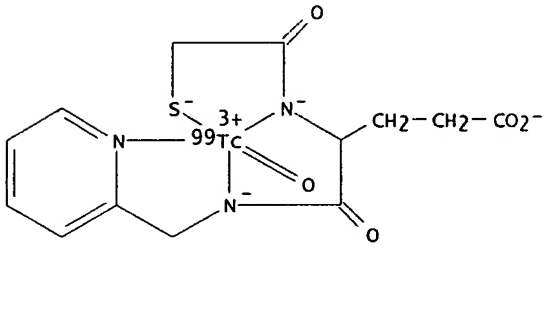
RN 190123-56-9 HCAPLUS
CN Technetium-99Tc, [4-hydroxy-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)



RN 190123-58-1 HCAPLUS
CN Rhenium, [4-hydroxy-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[(2-pyridinyl-.kappa.N)methyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

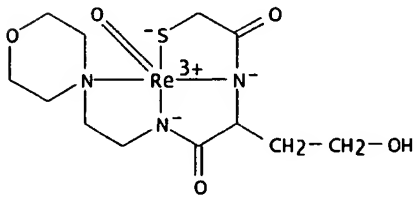


RN 190123-60-5 HCAPLUS
CN Technetate(1-)-99Tc, [4-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-5-oxo-5-[[(2-pyridinyl-.kappa.N)methyl]amino-.kappa.N]pentanoato(4-)]oxo-, hydrogen, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)



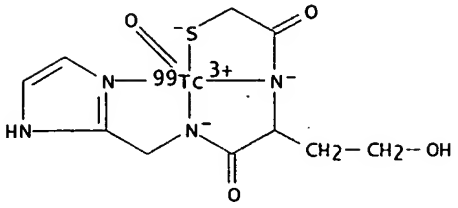
● H^+

RN 190123-61-6 HCAPLUS
CN Rhenium, [4-hydroxy-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]-N-[2-(4-morpholinyl-.kappa.N4)ethyl]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

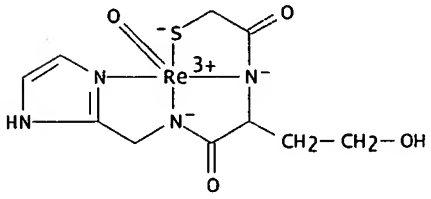


RN 190123-62-7 HCAPLUS
CN Technetium-99Tc, [4-hydroxy-N-[(1H-imidazol-2-yl-.kappa.N3)methyl]-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]butanamidato(3-)-.kappa.N]oxo-,

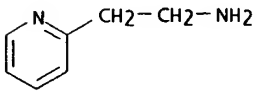
[SP-5-25-(S)]- (9CI) (CA INDEX NAME)



RN 190123-64-9 HCAPLUS
CN Rhenium, [4-hydroxy-N-[(1H-imidazol-2-yl-.kappa.N3)methyl]-2-[[(mercapto-.kappa.S)acetyl]amino-.kappa.N]butanamidato(3-)-.kappa.N]oxo-, [SP-5-25-(S)]- (9CI) (CA INDEX NAME)

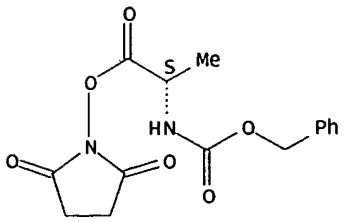


IT 2706-56-1, 2-Pyridineethanamine 3401-36-3
3731-51-9, 2-Pyridinemethanamine 4666-16-4
35677-89-5 90236-37-6
RL: RCT (Reactant)
(reactant; prepn., characterization, and biol. evaluation of Tc (V) and Re(V) complexes of heterocyclic tetradentate N3S ligands for tissue targeting)
RN 2706-56-1 HCAPLUS
CN 2-Pyridineethanamine (9CI) (CA INDEX NAME)

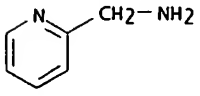


RN 3401-36-3 HCAPLUS
CN Carbamic acid, [(1S)-2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-1-methyl-2-oxoethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

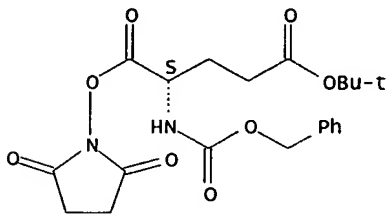


RN 3731-51-9 HCAPLUS
CN 2-Pyridinemethanamine (9CI) (CA INDEX NAME)



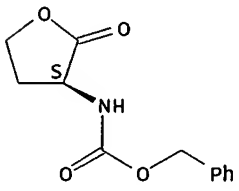
RN 4666-16-4 HCAPLUS
CN Pentanoic acid, 5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxo-4-[[(phenylmethoxy)carbonyl]amino]-, 1,1-dimethylethyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

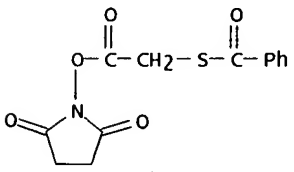


RN 35677-89-5 HCAPLUS
CN Carbamic acid, [(3S)-tetrahydro-2-oxo-3-furanyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 90236-37-6 HCAPLUS
CN Benzenecarbothioic acid, S-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl] ester (9CI) (CA INDEX NAME)



=> d bib abs hitstr l26 5

L26 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1996:170827 HCAPLUS
DN 124:225267
TI Difference imaging method for the identification of multidrug-resistant tumor cells
IN Dyszlewski, Mary Marmion; Doedens, Bart J.; Burleigh, B. Daniel
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9600085	A1	19960104	WO 1995-US8089	19950627

W: CA, CZ, FI, HU, JP, MX, NO, PL
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRAI US 1994-267068 19940627
AB A method is provided for identifying tumor cells exhibiting the multidrug-resistance (MDR) characteristic; the method uses a pair of radiolabeled compds. to form a difference image of the cells. One of the radiolabeled compds. is a substrate for P-glycoprotein and the other is not. The radiolabeled compds. may be labeled with the same or different radioisotope, and the compds. may be introduced or administered sequentially or simultaneously to obtain the difference image in one or two imaging sessions, resp. Prepn. of radiolabeled compds., e.g. 99mTc-Q45, is described. 99mTc-Q51 was prepd. by reacting 99mTcO4- with 5,5'-(1,2-ethanediyldiimino)bis(2-ethoxy-2-methyl-4-penten-3-one) and reacting the intermediate with PMe3-HCl. Compds. were tested using drug-sensitive and drug-resistant human renal carcinoma cell lines.
IT 15750-15-9, Indium-111, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic compd. labeled with; difference imaging method for the identification of multidrug-resistant tumor cells)
RN 15750-15-9 HCAPLUS
CN Indium, isotope of mass 111 (8CI, 9CI) (CA INDEX NAME)

^{111}In

IT 129134-13-0P 143049-63-2P 174529-19-2P
174529-20-5P
RL: BPR (Biological process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(difference imaging method for the identification of multidrug-resistant tumor cells)
RN 129134-13-0 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediyldi(nitrilo-.kappa.N)]bis[2-pentanonato-.kappa.O]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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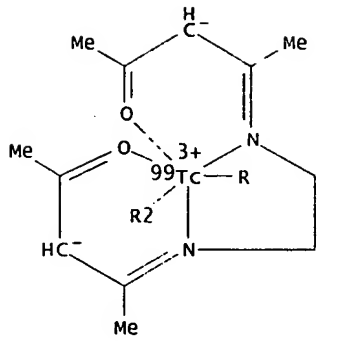

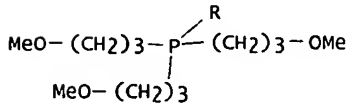

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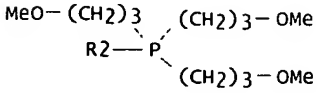
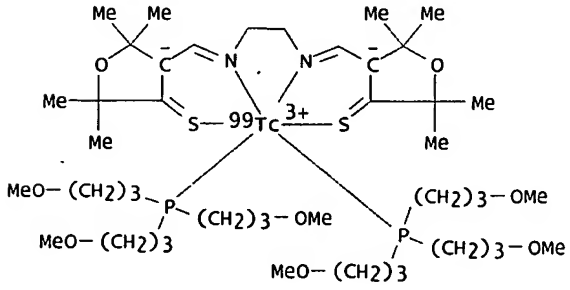
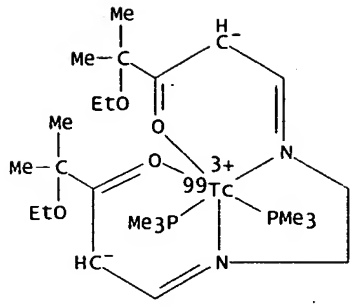


RN 143049-63-2 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-(9CI) (CA INDEX NAME)



RN 174529-19-2 HCAPLUS
CN Technetium(1+)-99Tc, [4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-.kappa.N8,.kappa.N11,.kappa.O5,.kappa.O14]bis(trimethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 174529-20-5 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris(3-methoxy-3-methylbutyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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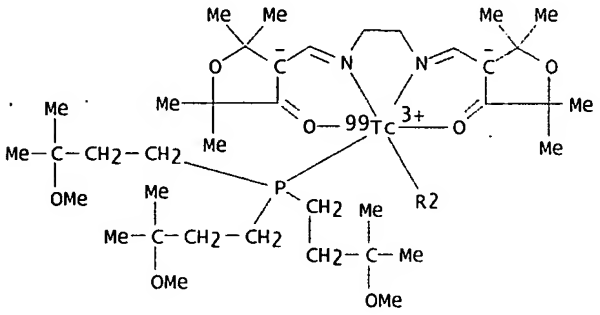

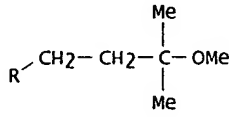

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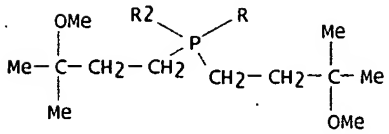
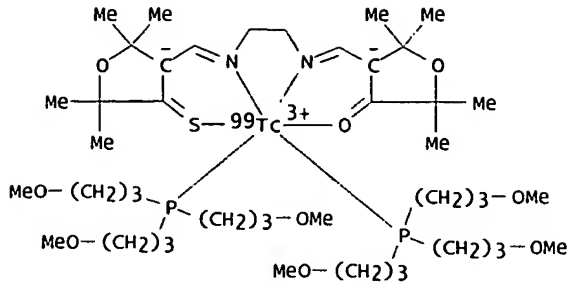


IT 143049-65-4 174529-29-4 174529-30-7
174529-31-8
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(difference imaging method for the identification of multidrug-resistant tumor cells)

RN 143049-65-4 HCAPLUS
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)



RN 174529-29-4 HCAPLUS
CN Technetium(1+)-99Tc, [[dimethyl N,N'-1,2-ethanediylbis[5-methoxy-5-methyl-3-oxohexanimidato]](2-)-N1,N1',O3,O3']bis[tris(3-methoxypropyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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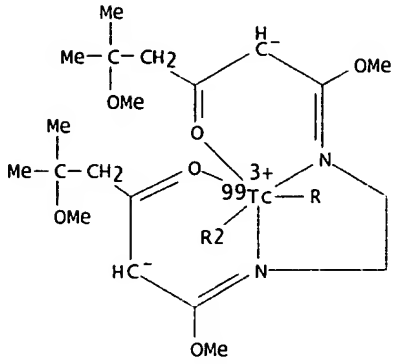

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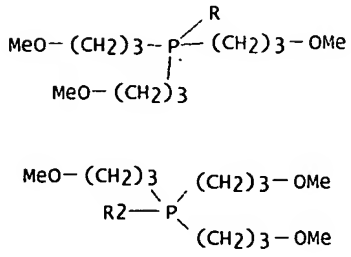

RN 174529-30-7 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediyldinitrilo)bis[2-pentanonato]](2-)-N,N',O,O']bis[tris(3-methoxy-3-methylbutyl)phosphine-P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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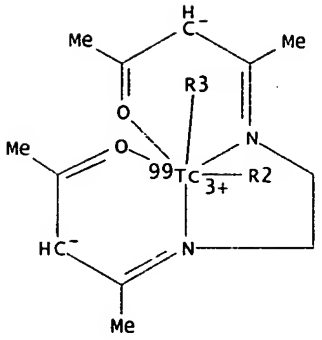

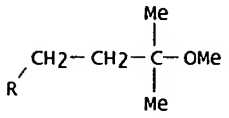

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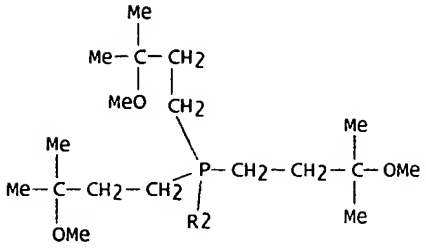
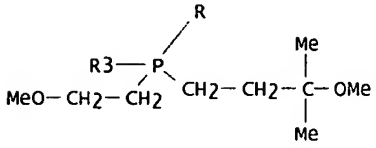
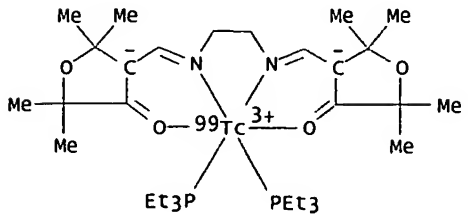




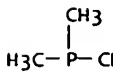
RN 174529-31-8 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis(triethylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



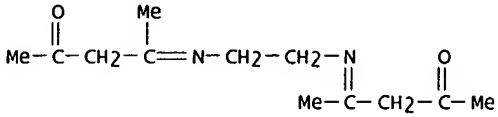
IT 594-09-2, Trimethylphosphine 6310-76-5
23288-61-1 142996-90-5 174529-21-6
174529-24-9 174529-25-0 174529-27-2

RL: RCT (Reactant)
(difference imaging method for the identification of multidrug-resistant tumor cells)

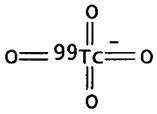
RN 594-09-2 HCAPLUS
CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



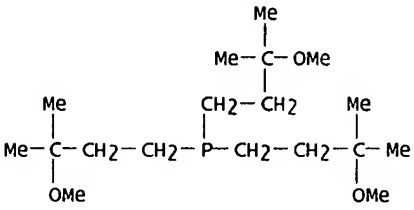
RN 6310-76-5 HCAPLUS
CN 2-Pentanone, 4,4'-(1,2-ethanediyldinitrilo)bis- (9CI) (CA INDEX NAME)



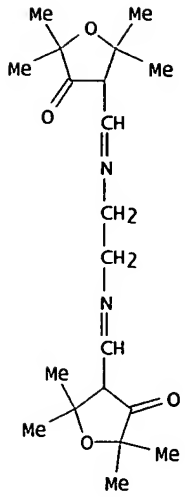
RN 23288-61-1 HCAPLUS
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



RN 142996-90-5 HCAPLUS
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



RN 174529-21-6 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 174529-24-9 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediyldinitrilo)bis[2-pentanonato]](2-)-N,N',O,O']bis[tris(2,4,6-trimethoxyphenyl)phosphine-P]-, (OC-6-13)-(9CI) (CA INDEX NAME)

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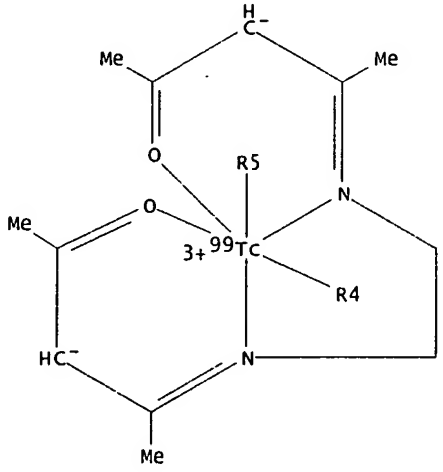

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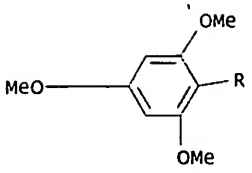
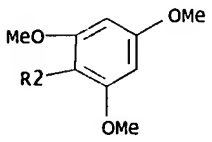
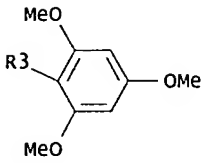
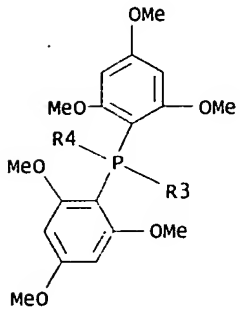




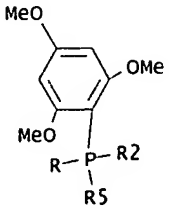
PAGE 3-A



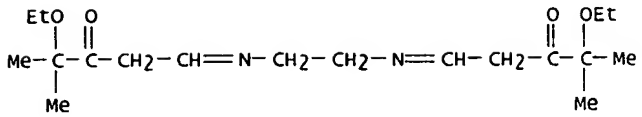
PAGE 4-A



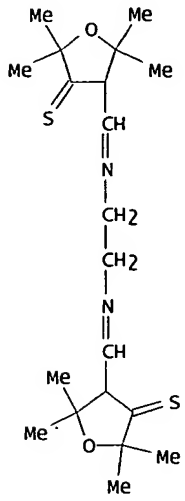
PAGE 5-A



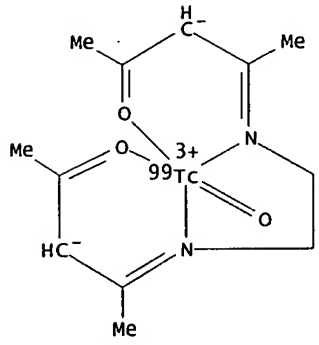
RN 174529-25-0 HCAPLUS
CN 3,16-Dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dione, 4,4,15,15-tetramethyl- (9CI) (CA INDEX NAME)



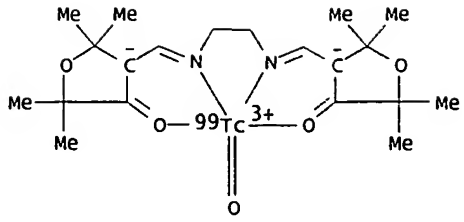
RN 174529-27-2 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



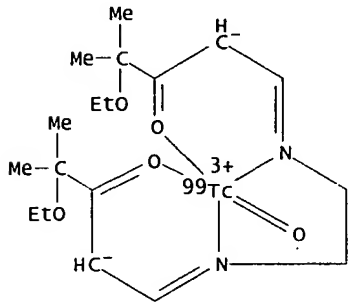
IT 107828-51-3P 174529-22-7P 174529-26-1P
174529-28-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(difference imaging method for the identification of multidrug-resistant tumor cells)
RN 107828-51-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-(1,2-ethanediyldinitrilo)bis[2-pentanonato]](2-)-N,N',O,O']oxo-, (SP-5-23)- (9CI) (CA INDEX NAME)



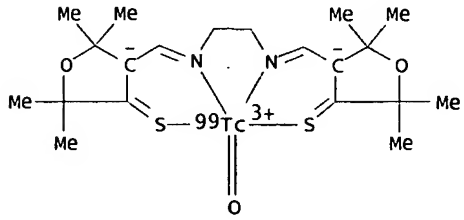
RN 174529-22-7 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']oxo-, (SP-5-23)- (9CI) (CA INDEX NAME)



RN 174529-26-1 HCAPLUS
CN Technetium(1+)-99Tc, oxo[4,4,15,15-tetramethyl-3,16-dioxa-8,11-diazaoctadeca-7,11-diene-5,14-dionato(2-)-N8,N11,O5,O14]-, (SP-5-23)-(9CI) (CA INDEX NAME)



RN 174529-28-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato]](2-)-N,N',S,S']oxo-, (SP-5-23)- (9CI) (CA INDEX NAME)

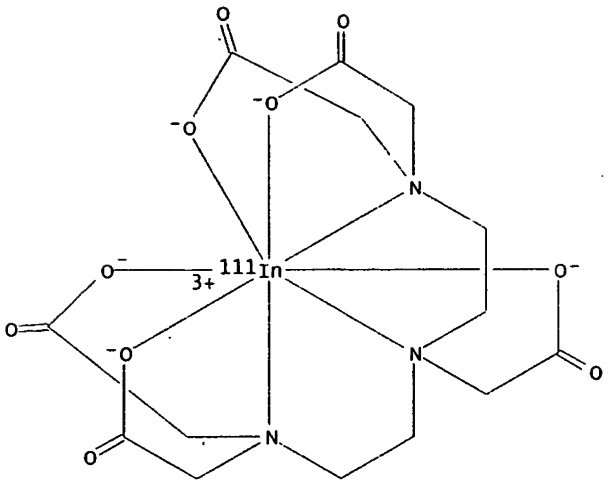


IT 15064-65-0, Thallium-201, biological studies 39400-71-0 63503-12-8 109581-73-9 144029-16-3
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(difference imaging method for the identification of multidrug-resistant tumor cells)
RN 15064-65-0 HCAPLUS
CN Thallium, isotope of mass 201 (8CI, 9CI) (CA INDEX NAME)

^{201}Tl

RN 39400-71-0 HCAPLUS
CN Indate(2-)-111In, [N,N-bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]glycinato(5-)-.kappa.N,.kappa.O]-, dihydrogen, (SA-8-11'1'3'1432)- (9CI) (CA INDEX NAME)

PAGE 1-A

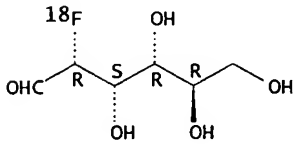


PAGE 2-A

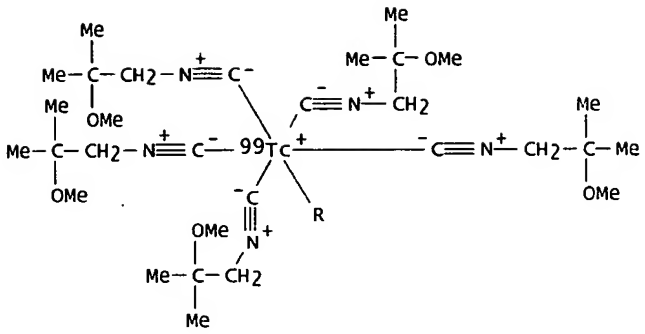
● 2 H^+

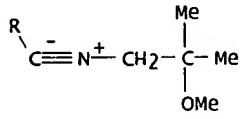
RN 63503-12-8 HCAPLUS
CN D-Glucose, 2-deoxy-2-(fluoro-18F)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

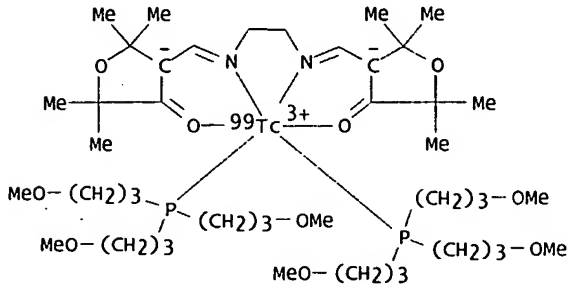


RN 109581-73-9 HCAPLUS
CN Technetium(1+)-99Tc, hexakis[1-(isocyano-.kappa.C)-2-methoxy-2-methylpropane]-, (OC-6-11)- (9CI) (CA INDEX NAME)





RN 144029-16-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)



IT 14133-76-7, Technetium-99, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metastable, compd. labeled with; difference imaging method for the identification of multidrug-resistant tumor cells)
RN 14133-76-7 HCAPLUS
CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

^{99}Tc

=> d bib abs hitstr l26 6

L26 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:234892 HCAPLUS
DN 122:4544
TI Imaging radiopharmaceutical formulations having non-stannous reductants
IN Brodack, James W.; Derosch, Mark A.; Deutsch, Edward A.; Deutsch, Karen F.; Dyszlewski, Mary Marmion
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9422496	A1	19941013	WO 1994-US3389	19940329
	W: AU, BR, CA, CZ, FI, HU, JP, KR, NO, PL, SK				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9464938	A1	19941024	AU 1994-64938	19940329
	EP 692978	A1	19960124	EP 1994-912332	19940329
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
	JP 08508500	T2	19960910	JP 1994-522283	19940329
	HU 75669	A2	19970528	HU 1995-2859	19940329
	CA 2158249	AA	19941013	CA 1994-2158249	19940929
	US 5662882	A	19970902	US 1995-410642	19950323
	NO 9503756	A	19950922	NO 1995-3756	19950922
	FI 9504598	A	19950928	FI 1995-4598	19950928
PRAI	US 1993-40739	19930331			
	WO 1994-US3389	19940329			

AB Radiopharmaceutical imaging agents having non-stannous reductants are disclosed. Metallic compds., e.g. Cu(I), Cu(II), Co(II), Fe(II), Sn(O), Zr(O), Cr(II), and Zn(O), will act to effectively reduce radionuclide contg. solns. Several nonmetallic compds., e.g. acids in general, dithionite, formamidine, formamadine sulfinic acid, phosphite, hypophosphite, dithiotreitol, hydrochloric acid, and borohydric acid may also be used to reduce radionuclide contg. solns. Moreover, it has been discovered that several agents, such as phosphines, sulfhydryl compds., phosphites, thiols, thioethers, borates, borocyano groups, ascorbates, and gentisates efficiently reduce radionuclide contg. solns. and complex with the radionuclide at the same time. The present invention also relates to kits for forming radiopharmaceutical imaging agents, the kits including non-stannous reducing agents.

IT 7439-89-6, Iron, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(divalent; imaging radiopharmaceutical formulations having non-stannous reductants)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-47-3 HCAPLUS
CN Chromium (8CI, 9CI) (CA INDEX NAME)

Cr

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

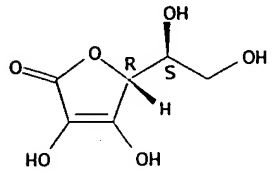
Co

IT 50-81-7, Ascorbic acid, biological studies 463-52-5, Formamidine 490-79-9, Gentisic acid 3483-12-3, Dithiothreitol 7440-31-5, Tin, biological studies 7440-66-6, Zinc, biological studies 7440-67-7, Zirconium, biological studies 7647-01-0, Hydrochloric acid,

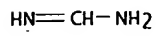
biological studies 7803-51-2, Phosphine 10043-35-3, Boric acid (H3BO3), biological studies 14844-07-6, Dithionite 14901-63-4, Phosphite 15460-68-1, Hypophosphite 15460-71-6 15498-68-7 83622-85-9, Tris(3-methoxypropyl)phosphine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(imaging radiopharmaceutical formulations having non-stannous reductants)

RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

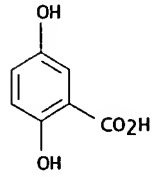
Absolute stereochemistry.



RN 463-52-5 HCAPLUS
CN Methanimidamide (9CI) (CA INDEX NAME)

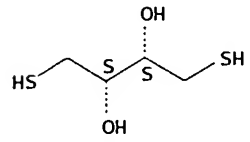


RN 490-79-9 HCAPLUS
CN Benzoic acid, 2,5-dihydroxy- (9CI) (CA INDEX NAME)



RN 3483-12-3 HCAPLUS
CN 2,3-Butanediol, 1,4-dimercapto-, (2R,3R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 7440-31-5 HCAPLUS
CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

RN 7440-67-7 HCAPLUS
CN Zirconium (8CI, 9CI) (CA INDEX NAME)

Zr

RN 7647-01-0 HCAPLUS
CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 7803-51-2 HCAPLUS
CN Phosphine (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 10043-35-3 HCAPLUS
CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 14844-07-6 HCAPLUS
CN Dithionite (8CI, 9CI) (CA INDEX NAME)

RN 14901-63-4 HCAPLUS
CN Phosphite (8CI, 9CI) (CA INDEX NAME)

RN 15460-68-1 HCAPLUS
CN Phosphinic acid, ion(1-) (9CI) (CA INDEX NAME)

RN 15460-71-6 HCAPLUS
CN Phosphonic acid, ion(1-) (8CI, 9CI) (CA INDEX NAME)

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 15498-68-7 HCAPLUS
CN Amidosulfurous acid, (aminomethylene)- (9CI) (CA INDEX NAME)

RN 83622-85-9 HCAPLUS
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)

IT 7440-50-8, Copper, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mono- and divalent; imaging radiopharmaceutical formulations having non-stannous reductants)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

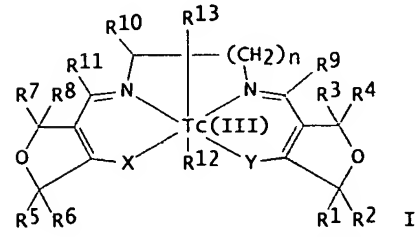
Cu

=> d bib abs hitstr l26 7

L26 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:612720 HCAPLUS
DN 117:212720
TI Preparation of 99mTc(III) complexes with bis(aminoalkylfuranone) and phosphine ligands as myocardial imaging agents
IN Woulfe, Steven R.; Deutsch, Edward A.; Dyszlewski, Mary M.; Neumann, William L.
PA Mallinckrodt Medical, Inc., USA
SO U.S., 12 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5112594	A	19920512	US 1991-680446	19910404
	CA 2097081	AA	19920622	CA 1991-2097081	19911220
	WO 9211040	A2	19920709	WO 1991-US9617	19911220
	WO 9211040	A3	19921015		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9211514	A1	19920722	AU 1992-11514	19911220
	AU 665181	B2	19951221		
	EP 563328	A1	19931006	EP 1992-904668	19911220
	EP 563328	B1	19990630		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
	JP 06504063	T2	19940512	JP 1991-504375	19911220
	AT 181673	E	19990715	AT 1992-904668	19911220
	IL 116602	A1	19970218	IL 1991-116602	19911225
PRAI	US 1990-632285	19901221			
	US 1991-680446	19910404			
	WO 1991-US9617	19911220			
	IL 1991-100500	19911225			

OS MARPAT 117:212720
GI



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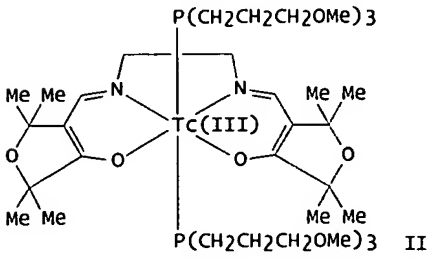


II

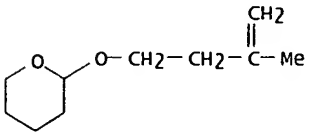
AB Title compds. [I; R1 - R11 = H, OH, (ester, ether, amide , ketone, aldehyde, nitrile group-contg.) alkyl; R12, R13 = PR14R15R16; R14 - R16 = H, alkyl, ether group, alkylaryl, dioxarylalkyl; X, Y = O, S], were prepd. Thus, 2,5-dimethyl-3-hexyne-2,5-diol was heated with HgO and H2SO4 in H2O to give 89% dihydro-2,2,5,5-tetramethyl-3(2H)furanone. The latter in Et2O was added to a mixt. of NaH, EtO2CCH, and trace EtOH in Et2O at 0.degree. and the mixt. was stirred overnight to give 79% 4-hydroxymethylenedihydro-

2,2,5,5-tetramethyl-3(2H)-furanone. The latter was refluxed with H2NCH2CH2NH2 in THF to give 76% 1,2-bis(dihydro-2,2,5,5-tetramethyl-13(2H)-furanone-4-methyleneamino]ethane. This in EtOH was treated successively with 99mTcO4- in saline, 1 M KOH, SnCl2 in EtOH, (MeOCH2CH2CH2)3P (prepn. from 1,3-propanedicl given) and 1 M HCl to give title compd. II in 90% radiochem. purity. I showed 0.8-1.1% heart uptake in guinea pigs 5-60 min after administration. I have high myocardial uptake combined with exceptionally rapid hepatobiliary clearance and extensive renal clearance to provide near ideal myocardial images in humans.

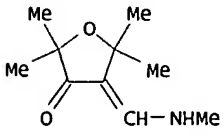
IT 36865-38-0P, 1-Chloro-3-ethoxypropane 55975-11-6P
83186-31-6P 142996-77-8P 142996-78-9P
142996-81-4P 142996-84-7P 143016-66-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for ligand for technetium myocardial imaging agent)

RN 36865-38-0 HCAPLUS
CN Propane, 1-chloro-3-ethoxy- (9CI) (CA INDEX NAME)

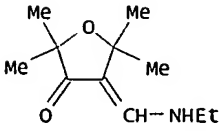
RN 55975-11-6 HCAPLUS
CN 2H-Pyran, tetrahydro-2-[(3-methyl-3-butenyl)oxy]- (9CI) (CA INDEX NAME)



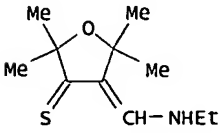
RN 83186-31-6 HCAPLUS
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]- (9CI) (CA INDEX NAME)



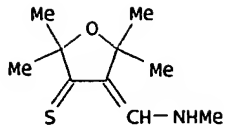
RN 142996-77-8 HCAPLUS
CN 3(2H)-Furanone, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



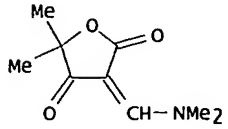
RN 142996-78-9 HCAPLUS
CN 3(2H)-Furanthione, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



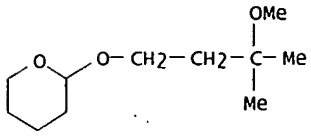
RN 142996-81-4 HCAPLUS
CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]- (9CI) (CA INDEX NAME)



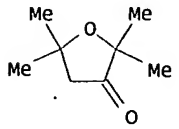
RN 142996-84-7 HCAPLUS
CN 2,4(3H,5H)-Furandione, 3-[(dimethylamino)methylene]-5,5-dimethyl- (9CI) (CA INDEX NAME)



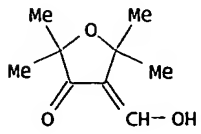
RN 143016-66-4 HCAPLUS
CN 2H-Pyran, tetrahydro-2-(3-methoxy-3-methylbutoxy)- (9CI) (CA INDEX NAME)



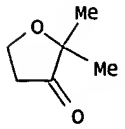
IT 5455-94-7P 7441-66-9P 52662-40-5P
142996-69-8P 142996-71-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediates for ligand for technetium myocardial imaging agent)
RN 5455-94-7 HCAPLUS
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



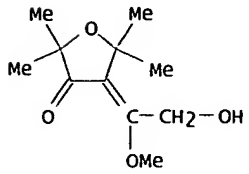
RN 7441-66-9 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



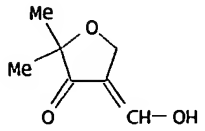
RN 52662-40-5 HCAPLUS
CN 3(2H)-Furanone, dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



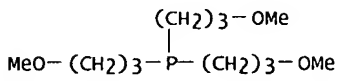
RN 142996-69-8 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(2-hydroxy-1-methoxyethylidene)-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



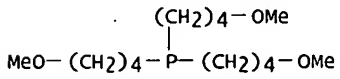
RN 142996-71-2 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2-dimethyl- (9CI) (CA INDEX NAME)



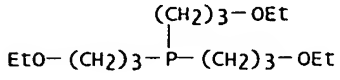
IT 83622-85-9P, Tris(3-methoxypropyl)phosphine 142996-87-0P, Tris(4-methoxybutyl)phosphine 142996-88-1P, Tris(3-ethoxypropyl)phosphine 142996-89-2P, Tris(2-methoxyethoxymethyl)phosphine 142996-90-5P, Tris(3-methoxy-3-methylbutyl)phosphine 142996-92-7P, 3-Methoxypropyldimethylphosphine 142996-93-8P, Bis(3-methoxypropyl)methylphosphine
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as ligand for technetium myocardial imaging agent)
RN 83622-85-9 HCAPLUS
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



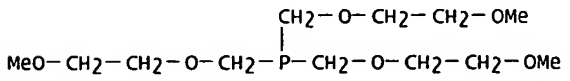
RN 142996-87-0 HCAPLUS
CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



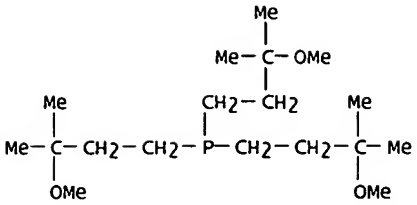
RN 142996-88-1 HCAPLUS
CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



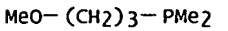
RN 142996-89-2 HCAPLUS
CN 2,5,9,12-Tetraoxa-7-phosphatridecane, 7-[(2-methoxyethoxy)methyl]- (9CI) (CA INDEX NAME)



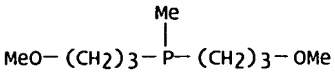
RN 142996-90-5 HCAPLUS
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



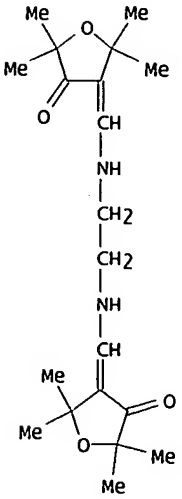
RN 142996-92-7 HCAPLUS
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)



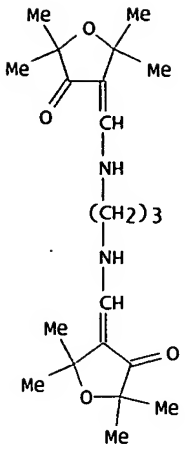
RN 142996-93-8 HCAPLUS
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



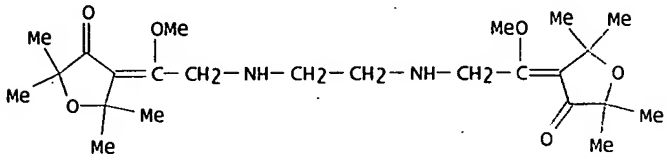
IT 142996-66-5P 142996-67-6P 142996-68-7P
142996-72-3P 142996-73-4P 142996-74-5P
143785-24-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as ligand for technetium myocardial imaging agents)
RN 142996-66-5 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



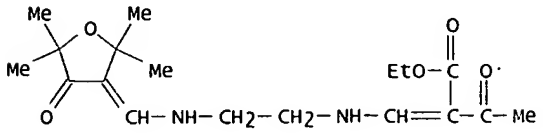
RN 142996-67-6 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



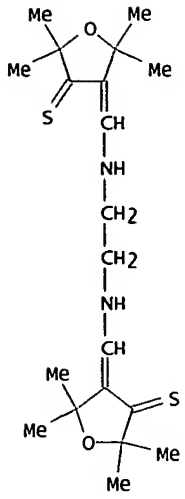
RN 142996-68-7 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis[imino(1-methoxy-2-ethanyl-1-ylidene)]]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



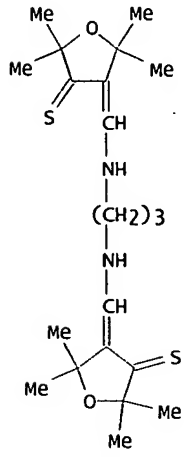
RN 142996-72-3 HCAPLUS
CN Butanoic acid, 2-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



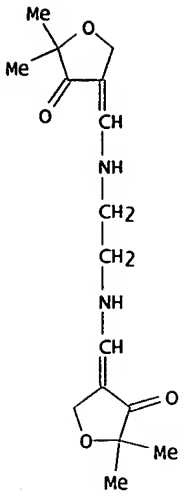
RN 142996-73-4 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 142996-74-5 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

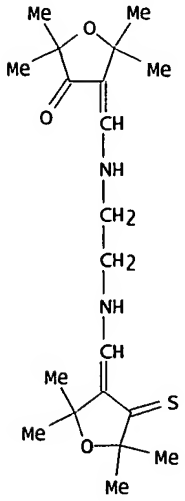


RN 143785-24-4 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)

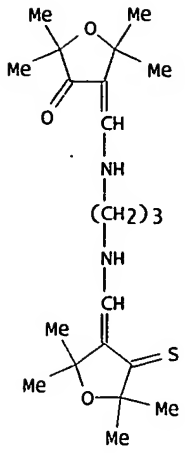


IT 142996-76-7P 142996-79-0P 142996-82-5P
142996-83-6P 142996-85-8P 143785-25-5P
143785-26-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as ligand for technetium of myocardial imaging agent)

RN 142996-76-7 HCAPLUS
CN 3(2H)-Furanone, 4-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

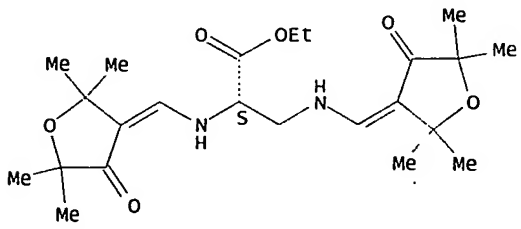


RN 142996-79-0 HCAPLUS
CN 3(2H)-Furanone, 4-[[[3-[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furanylidene)methyl]amino]propyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

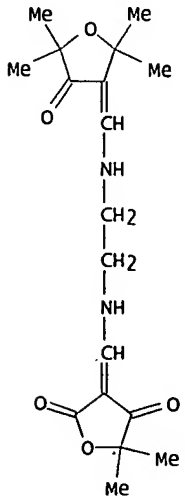


RN 142996-82-5 HCAPLUS
CN L-Alanine, N-[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]-3-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

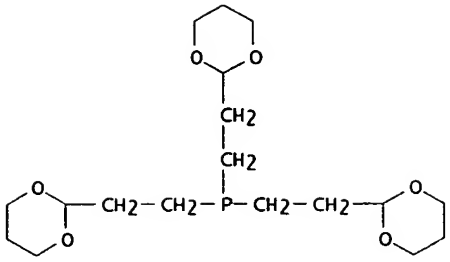
Absolute stereochemistry.
Double bond geometry unknown.



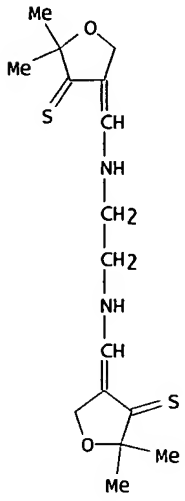
RN 142996-83-6 HCAPLUS
CN 2,4(3H,5H)-Furandione, 3-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]-5,5-dimethyl- (9CI) (CA INDEX NAME)



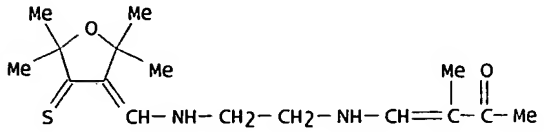
RN 142996-85-8 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



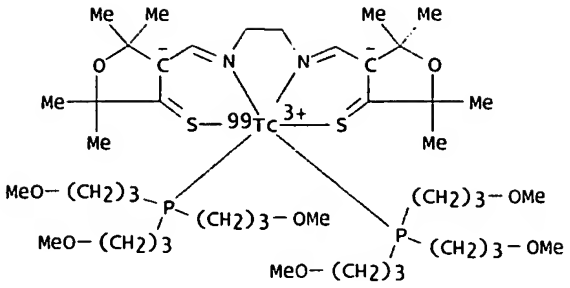
RN 143785-25-5 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



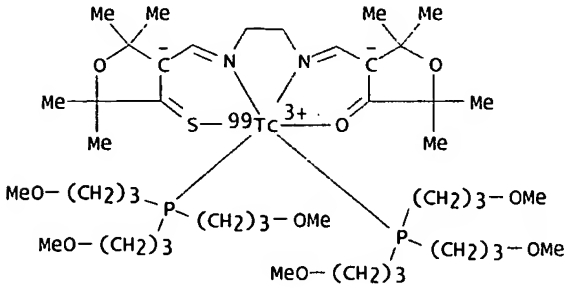
RN 143785-26-6 HCAPLUS
CN 3-Buten-2-one, 4-[[2-[[(dihydro-2,2,5,5-tetramethyl-3-thioxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]-3-methyl- (9CI) (CA INDEX NAME)



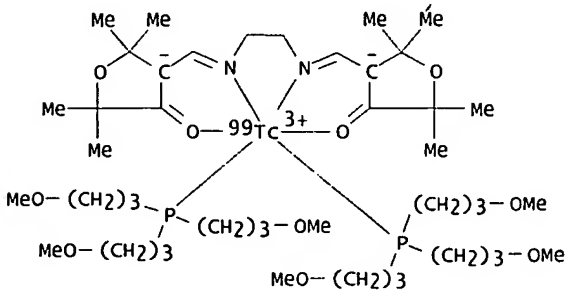
IT 143049-63-2P 143049-65-4P 144029-16-3P
144125-31-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as myocardial imaging agent)
RN 143049-63-2 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-(9CI) (CA INDEX NAME)



RN 143049-65-4 HCAPLUS
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)



RN 144029-16-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-13)-(9CI) (CA INDEX NAME)



RN 144125-31-5 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato-.kappa.O3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-.kappa.P]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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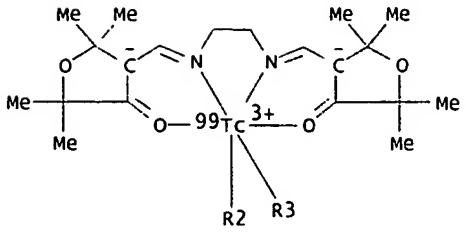
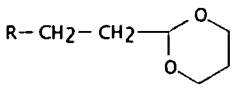
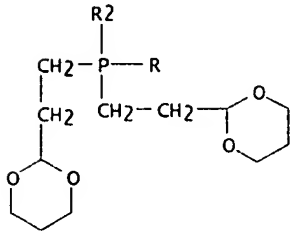
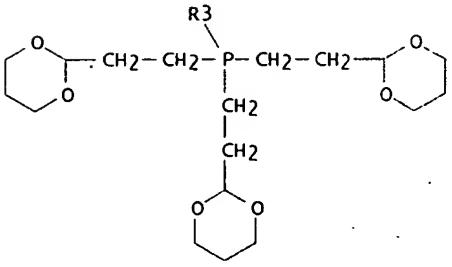




PAGE 2-A



PAGE 3-A

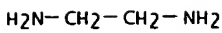


IT 74-89-5, Methylamine, reactions 107-15-3, Ethylenediamine, reactions 109-76-2, 1,3-Propylenediamine 109-94-4, Ethyl formate 123-54-6, Acetylacetone, reactions 142-30-3, 2,5-Dimethyl-3-hexyne-2,5-diol 3788-94-1, Ethyl 2-ethoxymethylene-3-oxobutanoate 6290-49-9, Methyl methoxyacetate 22621-30-3, 5,5-Dimethyltetronic acid 33884-43-4, 2-(2-Bromoethyl)-1,3-dioxane 35298-48-7, 2,2-Dimethyl-3(2H)-furanone 143119-70-4, Ethyl (2S)-2,3-diaminopropanoate dihydrochloride
RL: RCT (Reactant)
(reaction of, in prepn. of ligand for technetium myocardial imaging agent)

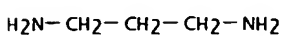
RN 74-89-5 HCAPLUS
CN Methanamine (9CI) (CA INDEX NAME)

H_3C-NH_2

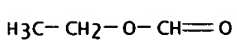
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



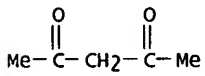
RN 109-76-2 HCAPLUS
CN 1,3-Propanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)



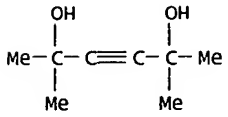
RN 109-94-4 HCAPLUS
CN Formic acid, ethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



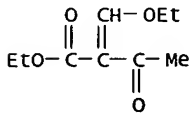
RN 123-54-6 HCAPLUS
CN 2,4-Pentanedione (8CI, 9CI) (CA INDEX NAME)



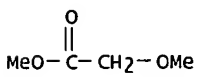
RN 142-30-3 HCAPLUS
CN 3-Hexyne-2,5-diol, 2,5-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



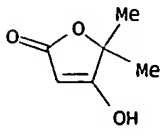
RN 3788-94-1 HCAPLUS
CN Butanoic acid, 2-(ethoxymethylene)-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



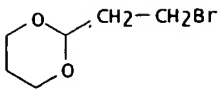
RN 6290-49-9 HCAPLUS
CN Acetic acid, methoxy-, methyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)



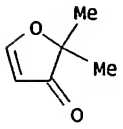
RN 22621-30-3 HCAPLUS
CN 2(5H)-Furanone, 4-hydroxy-5,5-dimethyl- (8CI, 9CI) (CA INDEX NAME)



RN 33884-43-4 HCAPLUS
CN 1,3-Dioxane, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)

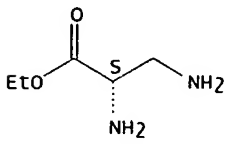


RN 35298-48-7 HCAPLUS
CN 3(2H)-Furanone, 2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 143119-70-4 HCAPLUS
CN L-Alanine, 3-amino-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

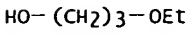
Absolute stereochemistry.



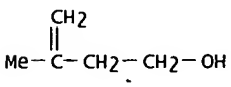
● 2 HCl

IT 111-35-3, 3-Ethoxypropanol 763-32-6 1498-42-6
3970-21-6, 2-Methoxyethoxymethyl chloride 17913-18-7,
1-Chloro-4-methoxybutane 18742-02-4 143907-66-8
RL: RCT (Reactant)
(reaction of, in prepn. of technetium myocardial imaging agent)

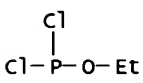
RN 111-35-3 HCAPLUS
CN 1-Propanol, 3-ethoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



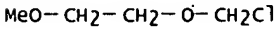
RN 763-32-6 HCAPLUS
CN 3-Buten-1-ol, 3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



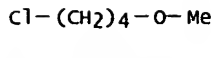
RN 1498-42-6 HCAPLUS
CN Phosphorodichloridous acid, ethyl ester (8CI, 9CI) (CA INDEX NAME)



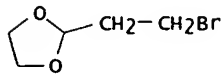
RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 17913-18-7 HCAPLUS
CN Butane, 1-chloro-4-methoxy- (9CI) (CA INDEX NAME)



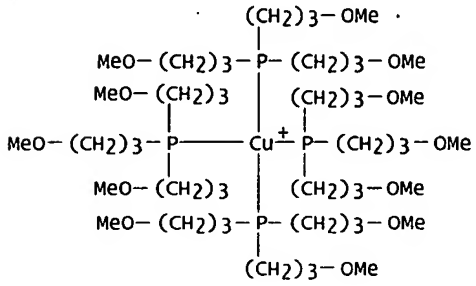
RN 18742-02-4 HCAPLUS
CN 1,3-Dioxolane, 2-(2-bromoethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 143907-66-8 HCAPLUS
CN Copper(1+), tetrakis[tris(3-methoxypropyl)phosphine-P]-, (T-4)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

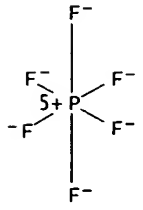
CM 1

CRN 143907-65-7
CMF C48 H108 Cu O12 P4
CCI CCS
CDES 7:T-4



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



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L26 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:507442 HCAPLUS
DN 117:107442
TI Technetium(III)-99m myocardial imaging agents and method of use
IN Woulfe, Steven R.; Deutsch, Edward A.; Dyszlewski, Mary M.; Neumann, William L.
PA Mallinckrodt Medical, Inc., USA
SO U.S., 12 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5112595	A	19920512	US 1990-632285	19901221
	CA 2097081	AA	19920622	CA 1991-2097081	19911220
	WO 9211040	A2	19920709	WO 1991-US9617	19911220
	WO 9211040	A3	19921015		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9211514	A1	19920722	AU 1992-11514	19911220
	AU 665181	B2	19951221		
	EP 563328	A1	19931006	EP 1992-904668	19911220
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	JP 06504063	T2	19940512	JP 1991-504375	19911220
	AT 181673	E	19990715	AT 1992-904668	19911220
	IL 100500	A1	19961031	IL 1991-100500	19911225
	IL 116602	A1	19970218	IL 1991-116602	19911225
PRAI	US 1990-632285	19901221			
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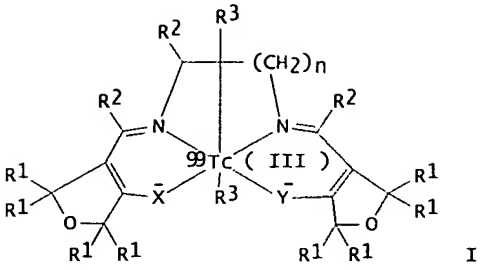


I

AB Myocardial imaging agents [I; R1, R2 = H, OH, (hydroxy)alkyl, ether, ester, amide, ketone, aldehyde, nitrile; X, Y = O, S; R3 = PR4(R5)2; R4 = H, R5; R5 = alkyl, ether, alkylaryl, dioxanylalkyl; n = 1, 2] comprise a 99mTc(III) complex ligated in a planar position by a tetradentate ligand and in the axial positions by phosphines. I exhibit improved biodistribution, improved labeling, and extremely rapid blood clearance following i.v. administration to humans. I show high myocardial uptake accompanied with exceptionally rapid hepatobiliary clearance and extensive renal clearance to give sufficiently high heart/liver and heart/lung ratios to provide nearly ideal myocardial images in humans. Thus, 2,5-dimethyl-3-hexyne-2,5-diol was heated with HgO and dil. H2SO4 to form dihydro-2,2,5,5-tetramethyl-3(2H)-furanone, which was further converted in 2 steps to 1,2-bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanone-4-methyleneamino]ethane (II). II was complexed with 99mTc(III) by reaction with 99mTcO4- and SnCl2 and the product was complexed with tris(3-methoxypropyl)phosphine.

IT 3970-21-6, 2-Methoxyethoxymethyl chloride 17913-18-7, 1-Chloro-4-methoxybutane 18742-02-4, 2-(2-Bromoethyl)-1,3-dioxolane 33884-43-4, 2-(2-Bromoethyl)-1,3-dioxane

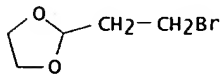
36865-38-0, 1-Chloro-3-ethoxypropane
RL: RCT (Reactant)
(Grignard reaction of, with phosphorus trichloride)
RN 3970-21-6 HCAPLUS
CN Ethane, 1-(chloromethoxy)-2-methoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)

MeO-CH2-CH2-O-CH2Cl

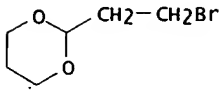
RN 17913-18-7 HCAPLUS
CN Butane, 1-chloro-4-methoxy- (9CI) (CA INDEX NAME)

Cl-(CH2)4-O-Me

RN 18742-02-4 HCAPLUS
CN 1,3-Dioxolane, 2-(2-bromoethyl)- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 33884-43-4 HCAPLUS
CN 1,3-Dioxane, 2-(2-bromoethyl)- (9CI) (CA INDEX NAME)



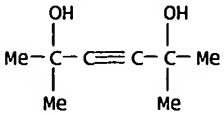
RN 36865-38-0 HCAPLUS
CN Propane, 1-chloro-3-ethoxy- (9CI) (CA INDEX NAME)

Cl-(CH2)3-O-Et

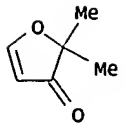
IT 111-35-3, 3-Ethoxypropanol
RL: RCT (Reactant)
(chlorination of)
RN 111-35-3 HCAPLUS
CN 1-Propanol, 3-ethoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

HO-(CH2)3-OEt

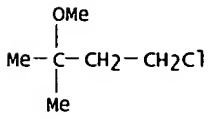
IT 142-30-3, 2,5-Dimethyl-3-hexyne-2,5-diol
RL: BIOL (Biological study)
(cyclooxidn. of)
RN 142-30-3 HCAPLUS
CN 3-Hexyne-2,5-diol, 2,5-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



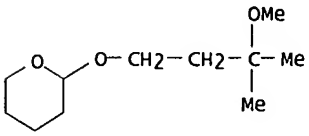
IT 35298-48-7, 2,2-Dimethyl-3(2H)-furanone
RL: RCT (Reactant)
(hydrogenation of)
RN 35298-48-7 HCAPLUS
CN 3(2H)-Furanone, 2,2-dimethyl- (9CI) (CA INDEX NAME)



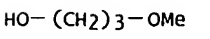
IT 142996-91-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and Grignard reaction of, with phosphorus trichloride)
RN 142996-91-6 HCAPLUS
CN Butane, 1-chloro-3-methoxy-3-methyl- (9CI) (CA INDEX NAME)



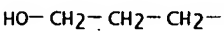
IT 143016-66-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and chlorination and deblocking of)
RN 143016-66-4 HCAPLUS
CN 2H-Pyran, tetrahydro-2-(3-methoxy-3-methylbutoxy)- (9CI) (CA INDEX NAME)



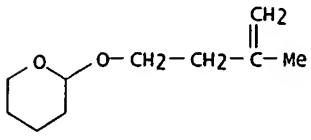
IT 1589-49-7P, 3-Methoxypropanol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and chlorination of)
RN 1589-49-7 HCAPLUS
CN 1-Propanol, 3-methoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 504-63-2P, 1,3-Propanediol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and methylation of)
RN 504-63-2 HCAPLUS
CN 1,3-Propanediol (8CI, 9CI) (CA INDEX NAME)

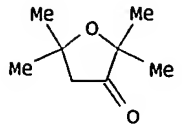


IT 55975-11-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and oxidn. of)
RN 55975-11-6 HCAPLUS
CN 2H-Pyran, tetrahydro-2-[(3-methyl-3-butenyl)oxy]- (9CI) (CA INDEX NAME)

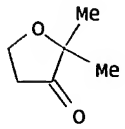


IT 5455-94-7P 52662-40-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with Et formate)
RN 5455-94-7 HCAPLUS

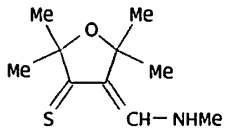
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



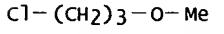
RN 52662-40-5 HCAPLUS
CN 3(2H)-Furanone, dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



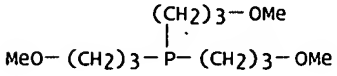
IT **142996-81-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with acetylacetone and ethylenediamine)
RN 142996-81-4 HCAPLUS
CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]- (9CI) (CA INDEX NAME)



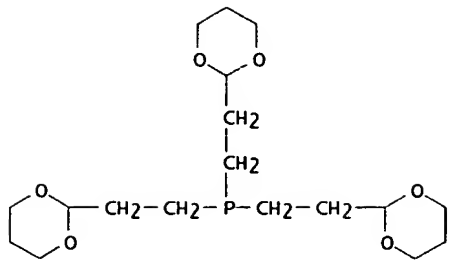
IT **36215-07-3P**, 1-Chloro-3-methoxypropane
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with dichloroethoxyphosphonite)
RN 36215-07-3 HCAPLUS
CN Propane, 1-chloro-3-methoxy- (9CI) (CA INDEX NAME)



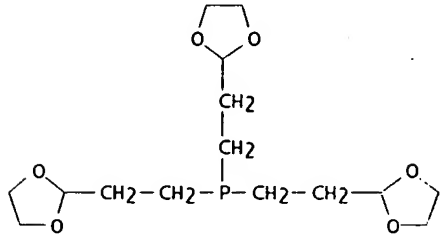
IT **83622-85-9P 142996-85-8P 142996-86-9P**
142996-87-0P 142996-88-1P 142996-89-2P
142996-90-5P 142996-92-7P 142996-93-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with dihydrofuranone deriv. and technetium)
RN 83622-85-9 HCAPLUS
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



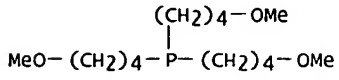
RN 142996-85-8 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



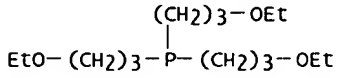
RN 142996-86-9 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxolan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



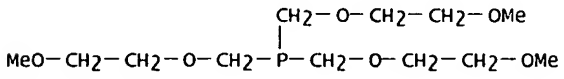
RN 142996-87-0 HCAPLUS
CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



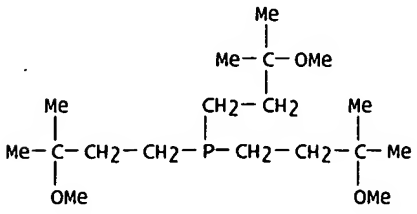
RN 142996-88-1 HCAPLUS
CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



RN 142996-89-2 HCAPLUS
CN 2,5,9,12-Tetraoxa-7-phosphatridecane, 7-[(2-methoxyethoxy)methyl]- (9CI) (CA INDEX NAME)

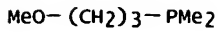


RN 142996-90-5 HCAPLUS
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)

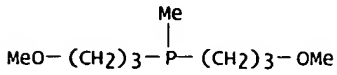


RN 142996-92-7 HCAPLUS

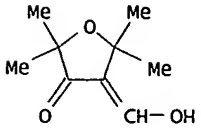
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)



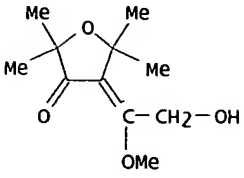
RN 142996-93-8 HCAPLUS
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



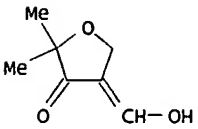
IT 7441-66-9P 142996-69-8P 142996-71-2P
142996-78-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with ethylenediamine)
RN 7441-66-9 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2,5,5-tetramethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



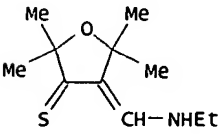
RN 142996-69-8 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(2-hydroxy-1-methoxyethylidene)-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 142996-71-2 HCAPLUS
CN 3(2H)-Furanone, dihydro-4-(hydroxymethylene)-2,2-dimethyl- (9CI) (CA INDEX NAME)

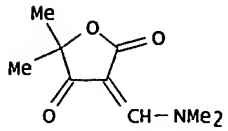


RN 142996-78-9 HCAPLUS
CN 3(2H)-Furanthione, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

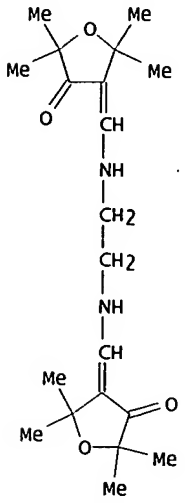


IT 142996-84-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with ethylenediamine and hydroxymethylenefuranone deriv.)

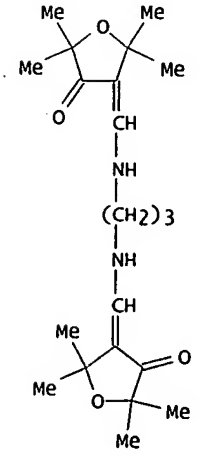
RN 142996-84-7 HCAPLUS
CN 2,4(3H,5H)-Furandione, 3-[(dimethylamino)methylene]-5,5-dimethyl- (9CI) (CA INDEX NAME)



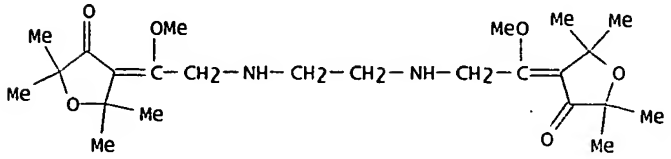
IT 142996-66-5P 142996-67-6P 142996-68-7P
142996-72-3P 142996-73-4P 142996-74-5P
142996-76-7P 142996-79-0P 142996-80-3P
142996-82-5P 142996-83-6P 143785-24-4P
143785-25-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with phosphine deriv. and technetium)
RN 142996-66-5 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



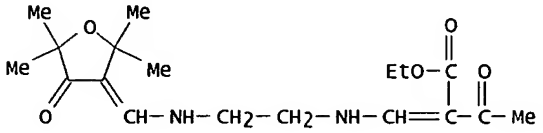
RN 142996-67-6 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



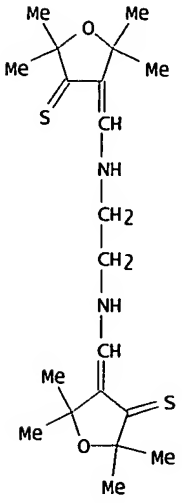
RN 142996-68-7 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis[imino(1-methoxy-2-ethanyl-1-ylidene)]]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



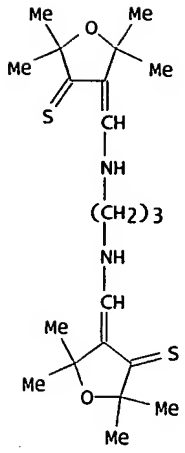
RN 142996-72-3 HCAPLUS
CN Butanoic acid, 2-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



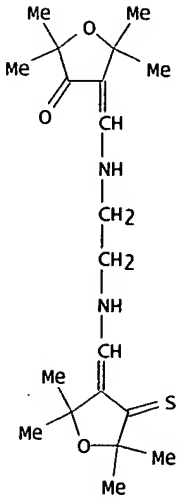
RN 142996-73-4 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



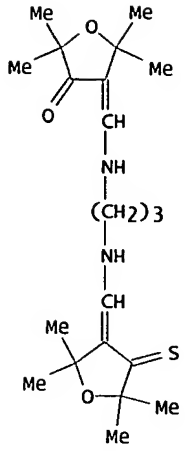
RN 142996-74-5 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,3-propanediylbis(iminomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



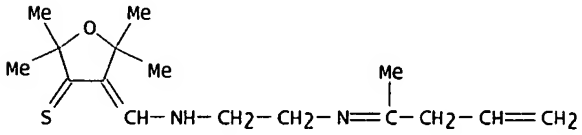
RN 142996-76-7 HCAPLUS
CN 3(2H)-Furanone, 4-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 142996-79-0 HCAPLUS
CN 3(2H)-Furanone, 4-[[[3-[[(dihydro-2,2,5,5-tetramethyl-4-thioxo-3(2H)-furanylidene)methyl]amino]propyl]amino]methylene]dihydro-2,2,5,5-tetramethyl- (9CI) (CA INDEX NAME)

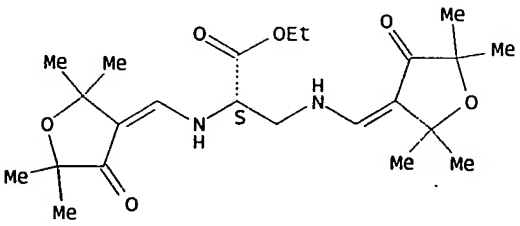


RN 142996-80-3 HCAPLUS
CN 3(2H)-Furanthione, dihydro-2,2,5,5-tetramethyl-4-[[[2-[(1-methyl-3-butenylidene)amino]ethyl]amino]methylene]- (9CI) (CA INDEX NAME)

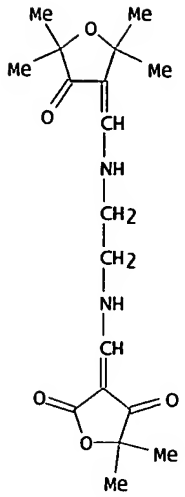


RN 142996-82-5 HCAPLUS
CN L-Alanine, N-[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]-3-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

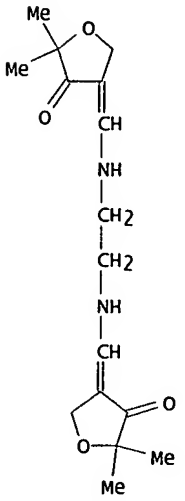
Absolute stereochemistry.
Double bond geometry unknown.



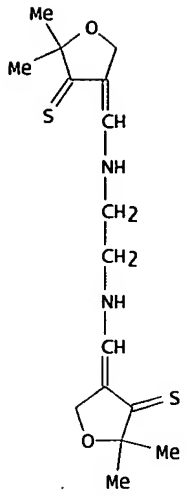
RN 142996-83-6 HCAPLUS
CN 2,4(3H,5H)-Furandione, 3-[[[2-[[(dihydro-2,2,5,5-tetramethyl-4-oxo-3(2H)-furanylidene)methyl]amino]ethyl]amino]methylene]-5,5-dimethyl- (9CI) (CA INDEX NAME)



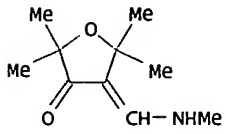
RN 143785-24-4 HCAPLUS
CN 3(2H)-Furanone, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



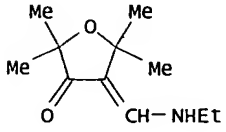
RN 143785-25-5 HCAPLUS
CN 3(2H)-Furanthione, 4,4'-[1,2-ethanediylbis(iminomethylidyne)]bis[dihydro-2,2-dimethyl- (9CI) (CA INDEX NAME)



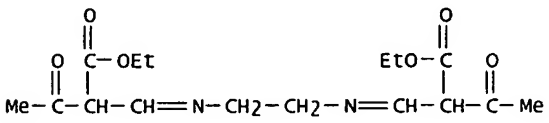
IT 83186-31-6P 142996-77-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and sulfurization of)
RN 83186-31-6 HCAPLUS
CN 3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-4-[(methylamino)methylene]-
(9CI) (CA INDEX NAME)



RN 142996-77-8 HCAPLUS
CN 3(2H)-Furanone, 4-[(ethylamino)methylene]dihydro-2,2,5,5-tetramethyl-
(9CI) (CA INDEX NAME)

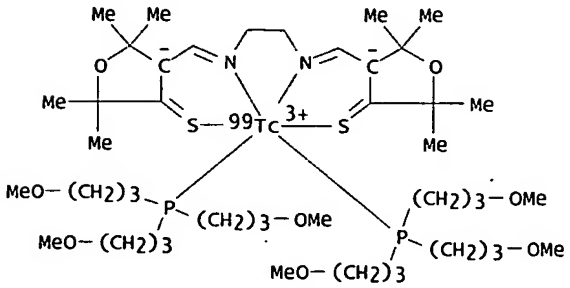


IT 15607-17-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 15607-17-7 HCAPLUS
CN Butanoic acid, 2,2'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[3-oxo-,
diethyl ester (9CI) (CA INDEX NAME)



IT 143049-63-2P 143049-64-3P 143049-65-4P
143049-66-5P 143049-67-6P 143120-23-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of and heart scintigraphy with metastable)
RN 143049-63-2 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-

.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-33)-(9CI) (CA INDEX NAME)



RN 143049-64-3 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanthionato-.kappa.S3]](2-)]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

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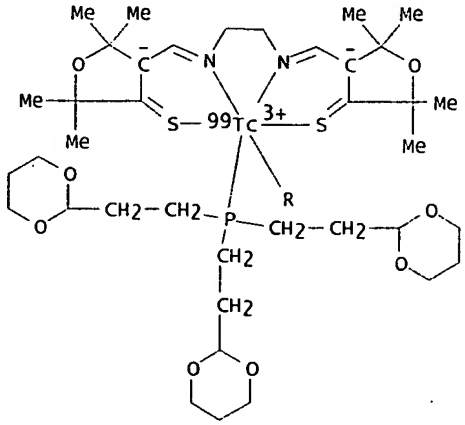

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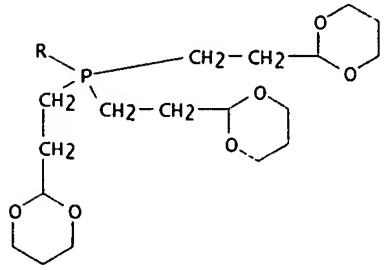
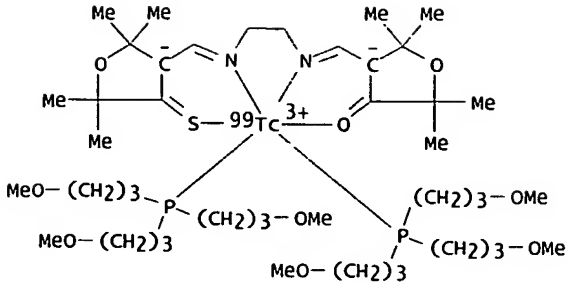


RN 143049-65-4 HCAPLUS
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[[tetrahydro-2,2,5,5-tetramethyl-4-(thioxo-.kappa.S)-3-furanyl]methylene]amino-.kappa.N]ethyl]imino-.kappa.N]methyl]-3(2H)-furanonato(2-)-.kappa.O3]bis[tris(3-methoxypropyl)phosphine-.kappa.P]-, (OC-6-52)- (9CI) (CA INDEX NAME)



RN 143049-66-5 HCAPLUS
CN Technetium(1+)-99Tc, [dihydro-2,2,5,5-tetramethyl-4-[[[2-[[(tetrahydro-2,2,5,5-tetramethyl-4-thioxo-3-furanyl)methylene]amino]ethyl]imino]methyl]-3(2H)-furanonato(2-)-N4,N4',O3,S4]bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

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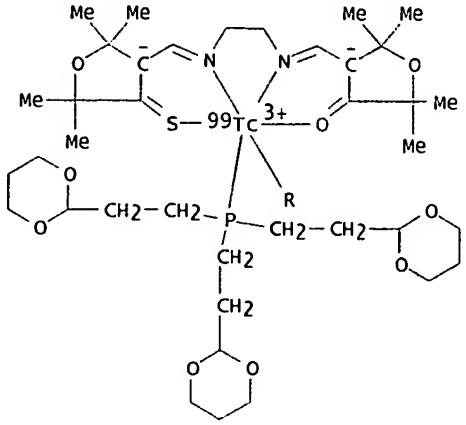

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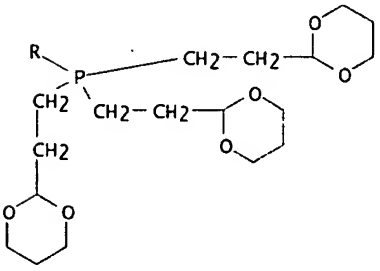

RN 143049-67-6 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dihydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris[2-(1,3-dioxan-2-yl)ethyl]phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

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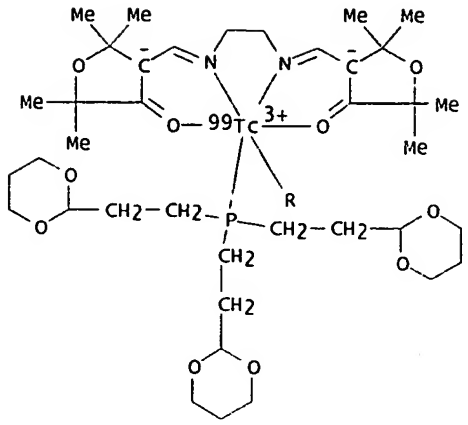

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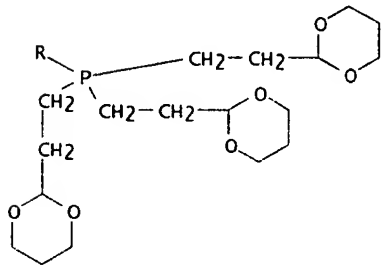
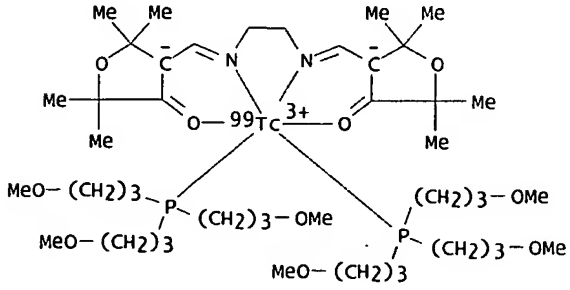


RN 143120-23-4 HCAPLUS
CN Technetium(1+)-99Tc, [[4,4'-[1,2-ethanediylbis(nitrilomethylidyne)]bis[dih ydro-2,2,5,5-tetramethyl-3(2H)-furanonato]](2-)-N4,N4',O3,O3']bis[tris(3-methoxypropyl)phosphine-P]-, (OC-6-33)- (9CI) (CA INDEX NAME)

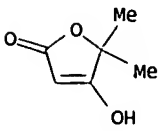


IT 14133-76-7DP, Technetium-99, complexes with dihydrofuranone derivs. and phosphines
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of metastable, for heart scintigraphy)
RN 14133-76-7 HCAPLUS
CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

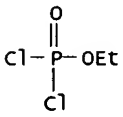
^{99}Tc

IT 22621-30-3, 5,5-Dimethyltetronic acid
RL: RCT (Reactant)

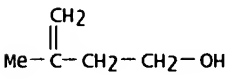
(reaction of, with DMF dimethylacetal)
RN 22621-30-3 HCAPLUS
CN 2(5H)-Furanone, 4-hydroxy-5,5-dimethyl- (8CI, 9CI) (CA INDEX NAME)



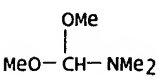
IT 1498-51-7
RL: RCT (Reactant)
(reaction of, with chloromethoxypropane)
RN 1498-51-7 HCAPLUS
CN Phosphorodichloridic acid, ethyl ester (8CI, 9CI) (CA INDEX NAME)



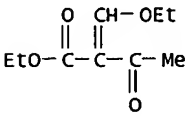
IT 763-32-6
RL: RCT (Reactant)
(reaction of, with dihydropyran)
RN 763-32-6 HCAPLUS
CN 3-Buten-1-ol, 3-methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



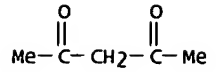
IT 4637-24-5, Dimethylformamide dimethylacetal
RL: RCT (Reactant)
(reaction of, with dimethyltetronic acid)
RN 4637-24-5 HCAPLUS
CN Methanamine, 1,1-dimethoxy-N,N-dimethyl- (9CI) (CA INDEX NAME)



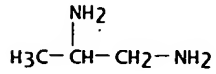
IT 3788-94-1, Ethyl 2-ethoxymethylene-3-oxobutanoate
RL: RCT (Reactant)
(reaction of, with ethylenediamine)
RN 3788-94-1 HCAPLUS
CN Butanoic acid, 2-(ethoxymethylene)-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



IT 123-54-6, Acetylacetone, reactions
RL: RCT (Reactant)
(reaction of, with ethylenediamine and methylaminomethylenefuranthione deriv.)
RN 123-54-6 HCAPLUS
CN 2,4-Pentanedione (8CI, 9CI) (CA INDEX NAME)

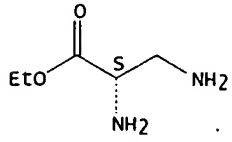


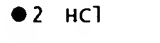
IT 78-90-0, Propylenediamine
RL: RCT (Reactant)
(reaction of, with hydroxymethylenedihydrofuranone deriv.)
RN 78-90-0 HCAPLUS
CN 1,2-Propanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 143119-70-4
RL: RCT (Reactant)
(reaction of, with hydroxymethylenefuranone deriv.)
RN 143119-70-4 HCAPLUS
CN L-Alanine, 3-amino-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.





IT 110-87-2
RL: RCT (Reactant)
(reaction of, with isoprenyl alc.)
RN 110-87-2 HCAPLUS
CN 2H-Pyran, 3,4-dihydro- (8CI, 9CI) (CA INDEX NAME)

=> d bib abs hitstr l26 10

L26 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1986:634863 HCAPLUS
DN 105:234863
TI Redox and spectral properties of some polypyridyl ruthenium, osmium and rhenium oxo complexes
AU Pipes, David Wayne
CS Univ. North Carolina, Chapel Hill, NC, USA
SO (1985) 271 pp. Avail.: Univ. Microfilms Int., Order No. DA8605623 From: Diss. Abstr. Int. B 1986, 47(2), 624-5
DT Dissertation
LA English
AB Unavailable
IT 7440-04-2D, polypyridyl oxo complexes 7440-15-5D , polypyridyl oxo complexes 7440-18-8D, polypyridyl oxo complexes
RL: PRP (Properties)
(redox and spectral properties of)
RN 7440-04-2 HCAPLUS
CN Osmium (8CI, 9CI) (CA INDEX NAME)

Os

RN 7440-15-5 HCAPLUS
CN Rhenium (8CI, 9CI) (CA INDEX NAME)

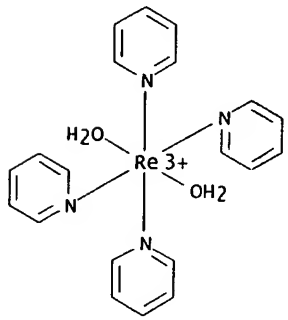
Re

RN 7440-18-8 HCAPLUS
CN Ruthenium (8CI, 9CI) (CA INDEX NAME)

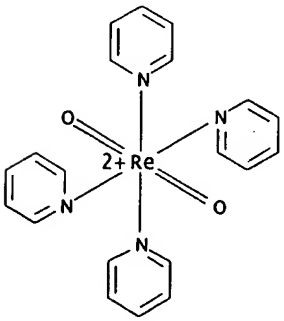
Ru

=> d bib abs hitstr l26 11

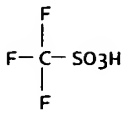
L26 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1986:504532 HCAPLUS
DN 105:104532
TI Electrochemistry of trans-dioxo complexes of rhenium (V) in water
AU Pipes, David W.; Meyer, Thomas J.
CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27514, USA
SO Inorg. Chem. (1986), 25(18), 3256-62
CODEN: INOCAJ; ISSN: 0020-1669
DT Journal
LA English
AB Cyclic voltammetry of trans-[(py)4ReV(O)2]+ (py = pyridine) in aq. solns. at glassy-C electrodes shows that oxidn. states Re(VI)(d1) to Re(II)(d5) are accessible within the solvent limits. Similar behavior is obsd. for trans-[(CN)4ReV(O)2]3- and trans-[(en)2ReV(O)2]+. Redn. to Re(II) at O .ltoreq. pH .ltoreq. 14 leads to H; kobsd (room temp., .mu. = 0.1 M) = 2.4 (.+-.1.5) .times. 10-3 s-1 at pH 1.2. At pH 6.8 or 13.0, the addn. of NO2- or SO32- suppresses H2O redn. at the expense of electrocatalytic redn. of NO2- to NH3 and N2O and of SO32- to H2S or HS-. Comparisons between the Re-pyridyl-based couples and the structurally and electronically related trans-[(bpy)2OsVI(O)2]+ (bpy = 2,2'- bipyridine) couples suggest that the pattern of couples that appear and their pH dependences are detd. largely by the d-electronic configurations of the components. Differences in the magnitudes of redox potentials between electronically equiv. Re and Os couples were detd. by the differences in oxidn. state between the 2 types of couples.
IT 103191-77-1
RL: PRP (Properties)
(acid/base properties of)
RN 103191-77-1 HCAPLUS
CN Rhenium(3+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



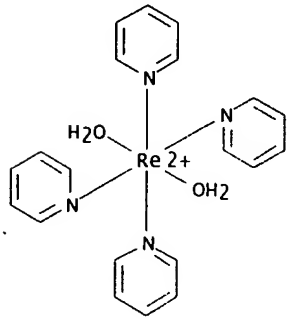
IT 99269-02-0
RL: PRP (Properties)
(elec. potential of redox couple contg.)
RN 99269-02-0 HCAPLUS
CN Rhenium(2+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



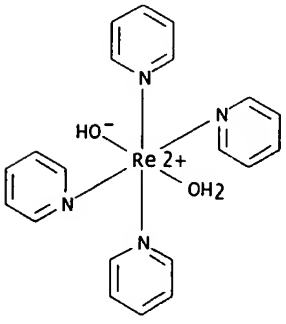
IT 1493-13-6
RL: PRP (Properties)
(elec. redn. potentials of rhenium complexes and visible spectrum of rhenium complexes in aq. solns. contg.)
RN 1493-13-6 HCAPLUS
CN Methanesulfonic acid, trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



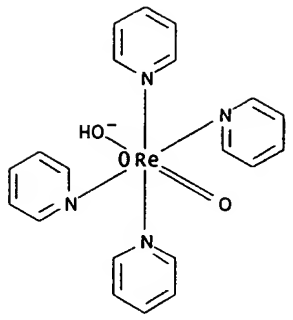
IT 99268-99-2 99269-00-8 99269-01-9
103191-75-9 103191-76-0
RL: PRP (Properties)
(electrochem. formation in aq. soln. and visible spectrum of)
RN 99268-99-2 HCAPLUS
CN Rhenium(2+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



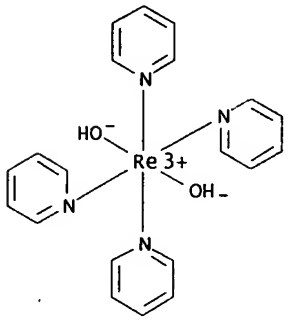
RN 99269-00-8 HCAPLUS
CN Rhenium(1+), aquahydroxytetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



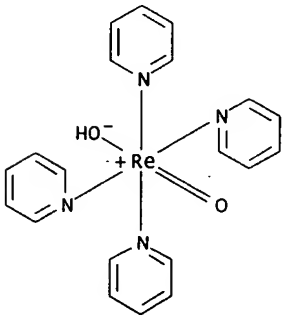
RN 99269-01-9 HCAPLUS
CN Rhenate(1-), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



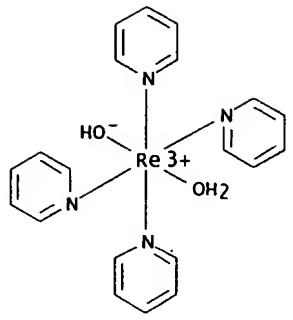
RN 103191-75-9 HCAPLUS
CN Rhenium(1+), dihydroxytetrakis(pyridine)- (9CI) (CA INDEX NAME)



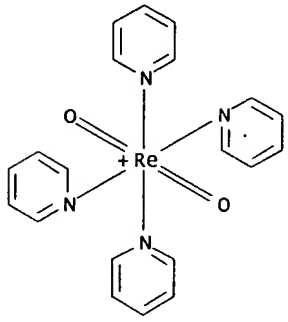
RN 103191-76-0 HCAPLUS
CN Rhenium, hydroxyoxotetrakis(pyridine)- (9CI) (CA INDEX NAME)



IT 103191-74-8
RL: PRP (Properties)
(electrochem. formation in aq. solns. and acid/base properties and spectrum of)
RN 103191-74-8 HCAPLUS
CN Rhenium(2+), aquahydroxytetrakis(pyridine)- (9CI) (CA INDEX NAME)



IT 21710-28-1
RL: PRP (Properties)
(electrochem. redn. in aq. soln. and visible spectrum of)
RN 21710-28-1 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



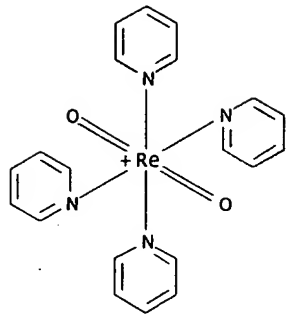
IT 1333-74-0P, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in electrocatalytic redn. of water by rhenium -pyridine complex)
RN 1333-74-0 HCAPLUS
CN Hydrogen (8CI, 9CI) (CA INDEX NAME)

H—H

IT 83311-31-3P
RL: RCT (Reactant); PREP (Preparation)
(prepn. and electrochem. redn. of)
RN 83311-31-3 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, perchlorate (9CI) (CA INDEX NAME)

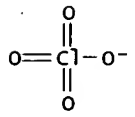
CM 1

CRN 21710-28-1
CMF C20 H20 N4 O2 Re
CCI CCS
CDES 7:OC-6-12



CM 2

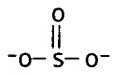
CRN 14797-73-0
CMF Cl O4



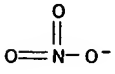
IT 7732-18-5, reactions
RL: RCT (Reactant)
(redn. of, electrochem., rhenium pyridine complex catalyst in)
RN 7732-18-5 HCAPLUS
CN Water (8CI, 9CI) (CA INDEX NAME)

H_2O

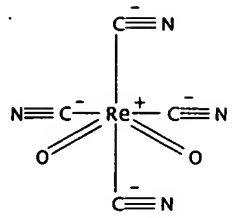
IT 14265-45-3 14797-55-8, reactions
RL: RCT (Reactant)
(redn. of, electrochem., rhenium-pyridine complex catalyst in)
RN 14265-45-3 HCAPLUS
CN Sulfite (8CI, 9CI) (CA INDEX NAME)



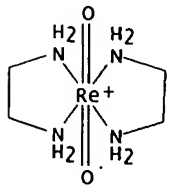
RN 14797-55-8 HCAPLUS
CN Nitrate (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 20756-46-1 21602-78-8
RL: RCT (Reactant)
(redox reactions of, electrochem.)
RN 20756-46-1 HCAPLUS
CN Rhenate(3-), tetrakis(cyano-.kappa.C)dioxo-, (OC-6-12)- (9CI) (CA INDEX NAME)



RN 21602-78-8 HCAPLUS
CN Rhenium(1+), bis(1,2-ethanediamine-.kappa.N,.kappa.N')dioxo-, (OC-6-12)-(9CI) (CA INDEX NAME)

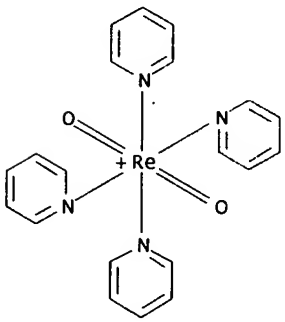


=> d bib abs hitstr l26 12

L26 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1985:623084 HCAPLUS
DN 103:223084
TI Aqueous electrochemistry of trans-(py)4ReV(O)2+. Electrocatalytic reductions based on rhenium(II)
AU Pipes, David W.; Meyer, Thomas J.
CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27514, USA
SO J. Am. Chem. Soc. (1985), 107(24), 7201-2
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
AB The aq. electrochem. of trans-(py)4ReV(O)2+ reveals the existence of pH dependent Re(V/III) and Re(III/II) couples and a pH independent Re(VI/V) couple over the pH range 0.5 to 13. Following redn. past the Re(III/II) couple the Re system becomes an electrocatalyst for the redn. of H2O to H and for the redn. of NO2- to NH3.
IT 83311-31-3
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(cyclic voltammetry of, on glassy carbon in triflic acid)
RN 83311-31-3 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)-, perchlorate (9CI) (CA INDEX NAME)

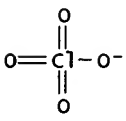
CM 1

CRN 21710-28-1
CMF C20 H20 N4 O2 Re
CCI CCS
CDES 7:OC-6-12

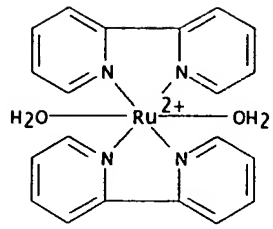


CM 2

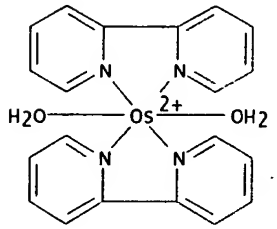
CRN 14797-73-0
CMF Cl O4



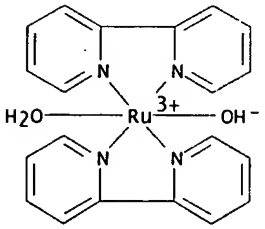
IT 72174-09-5 84988-25-0
RL: PRP (Properties)
(elec. potential of redox system contg., electron configuration in relation to)
RN 72174-09-5 HCAPLUS
CN Ruthenium(2+), diaquabis(2,2'-bipyridine-.kappa.N1,.kappa.N1')-, (OC-6-22)- (9CI) (CA INDEX NAME)



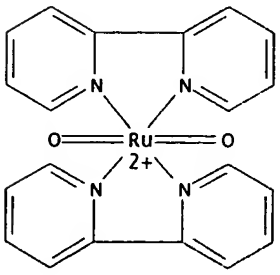
RN 84988-25-0 HCAPLUS
CN Osmium(2+), diaquabis(2,2'-bipyridine-N,N')-, (OC-6-22)- (9CI) (CA INDEX NAME)



IT 72155-92-1 84988-24-9 84988-27-2
84988-28-3 84988-29-4 85114-19-8
99269-02-0 99269-03-1 99280-69-0
RL: PRP (Properties)
(elec. redn. potential of, electron configuration in relation to)
RN 72155-92-1 HCAPLUS
CN Ruthenium(2+), aquabis(2,2'-bipyridine-N,N')hydroxy-, (OC-6-23)- (9CI) (CA INDEX NAME)

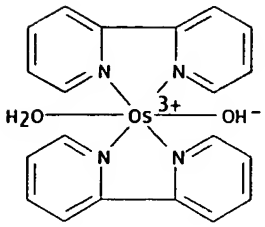


RN 84988-24-9 HCAPLUS
CN Ruthenium(2+), bis(2,2'-bipyridine-N,N')dioxo-, (OC-6-22)- (9CI) (CA INDEX NAME)

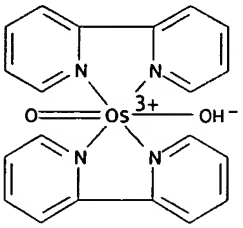


RN 84988-27-2 HCAPLUS
CN Osmium(2+), aquabis(2,2'-bipyridine-N,N')hydroxy-, (OC-6-33)- (9CI) (CA

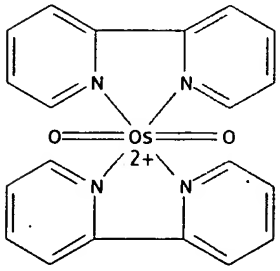
INDEX NAME)



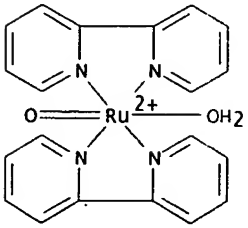
RN 84988-28-3 HCAPLUS
CN Osmium(2+), bis(2,2'-bipyridine-N,N')hydroxyoxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



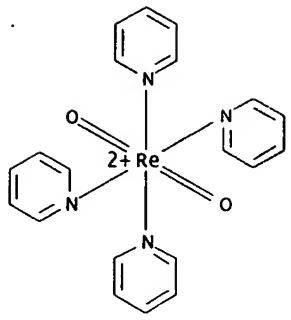
RN 84988-29-4 HCAPLUS
CN Osmium(2+), bis(2,2'-bipyridine-N,N')dioxo-, (OC-6-22)- (9CI) (CA INDEX NAME)



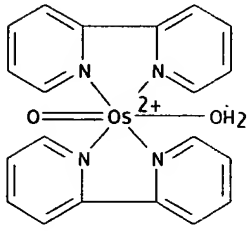
RN 85114-19-8 HCAPLUS
CN Ruthenium(2+), aquabis(2,2'-bipyridine-N,N')oxo-, (OC-6-23)- (9CI) (CA INDEX NAME)



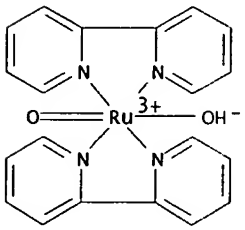
RN 99269-02-0 HCAPLUS
CN Rhenium(2+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



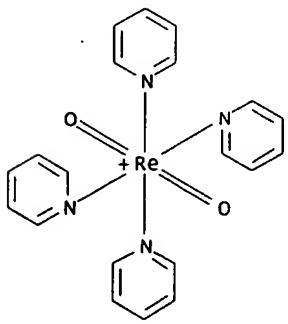
RN 99269-03-1 HCAPLUS
CN Osmium(2+), aquabis(2,2'-bipyridine-N,N')oxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



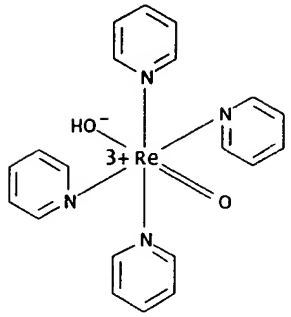
RN 99280-69-0 HCAPLUS
CN Ruthenium(2+), bis(2,2'-bipyridine-N,N')hydroxyoxo-, (OC-6-33)- (9CI) (CA INDEX NAME)



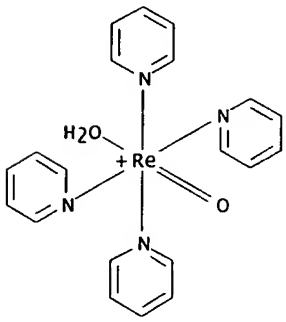
IT 21710-28-1 47515-09-3 99268-98-1
RL: PRP (Properties)
(elec. redn. potential of, pH in relation to)
RN 21710-28-1 HCAPLUS
CN Rhenium(1+), dioxotetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



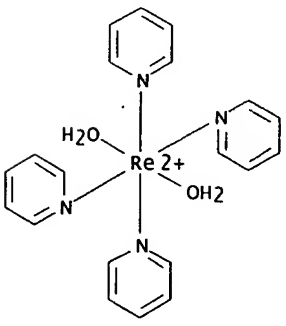
RN 47515-09-3 HCAPLUS
CN Rhenium(2+), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



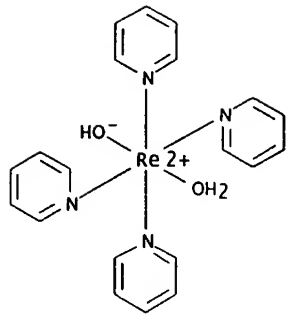
RN 99268-98-1 HCAPLUS
CN Rhenium(1+), aquaoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



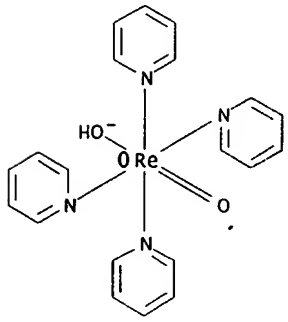
IT 99268-99-2 99269-00-8 99269-01-9
RL: PRP (Properties)
(elec. redox potential of system contg., pH in relation to)
RN 99268-99-2 HCAPLUS
CN Rhenium(2+), diaquatetrakis(pyridine)-, (OC-6-12)- (9CI) (CA INDEX NAME)



RN 99269-00-8 HCAPLUS
CN Rhenium(1+), aquahydroxytetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



RN 99269-01-9 HCAPLUS
CN Rhenate(1-), hydroxyoxotetrakis(pyridine)-, (OC-6-23)- (9CI) (CA INDEX NAME)



IT 1333-74-0P, preparation
RL: PREP (Preparation)
(evolution of, in electrochem. redn. of water, rhenium bipyridine complex electrocatalyst for)
RN 1333-74-0 HCAPLUS
CN Hydrogen (8CI, 9CI) (CA INDEX NAME)

H—H

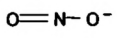
IT 7664-41-7P, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in electrochem. redn. of nitrite, rhenium bipyridine electrocatalyst for)
RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

NH_3

IT 7732-18-5, reactions 14797-65-0, reactions
RL: RCT (Reactant)
(redn. of, rhenium(II) pyridine complex electrocatalyst for)
RN 7732-18-5 HCAPLUS
CN Water (8CI, 9CI) (CA INDEX NAME)

H_2O

RN 14797-65-0 HCAPLUS
CN Nitrite (8CI, 9CI) (CA INDEX NAME)



=> d bib abs hitstr l28 1

L28 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:241925 HCAPLUS
DN 132:300074
TI Experimental and theoretical studies of pit initiation at single MnS inclusions in stainless steels
AU Webb, E. G.; Suter, T.; Topin, F.; Alkire, R. C.
CS Department of Chemical Engineering and Frederick Seitz Materials Research Laboratory, University of Illinois, Urbana, IL, USA
SO Proc. - Electrochem. Soc. (1999), 99-27(Passivity and Localized Corrosion), 425-434
CODEN: PESODO; ISSN: 0161-6374
PB Electrochemical Society
DT Journal
LA English
AB Pit initiation at single large MnS inclusion of 304 stainless steel was studied exptl. and numerically. The use of microcapillaries as electrochem. cells allowed the testing of small areas with only one inclusion. In 1M NaCl measurements were performed parallel and perpendicular to the rolling direction of a thin 304 steel plate. In parallel direction the inclusions were shallow and in perpendicular direction deep. Multiple current transients were obsd. during dissoln. of a shallow inclusion but the metastable events did not initiate stable pitting. Polarization curves measured on deep MnS inclusions showed active pitting. The dissoln. of shallow MnS inclusion did not form a deep microcrevice between the MnS and stainless steel matrix. The geometry did not allow high concns. of aggressive species. However, the dissoln. of deep MnS inclusions formed deep microcrevices at the interface MnS inclusion/bulk leading to stable pitting. The chem. inside a microcrevice was simulated using both a 1-dimensional and a 2-dimensional finite difference model. Simulations of deep MnS inclusions indicated that in a 3 .mu.m deep microcrevice the combination of pH 2 and a chloride concn. of 5M lead to stable pitting.
IT 18820-29-6, Manganese sulfide (MnS)
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(exptl. and theor. studies of pit initiation at single MnS inclusions in stainless steels: electrolytic polarization of stainless steels with MnS . inclusions in NaCl soln.)
RN 18820-29-6 HCAPLUS
CN Manganese sulfide (MnS) (8CI, 9CI) (CA INDEX NAME)

Mn=S

IT 11109-50-5, AISI 304
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(exptl. and theor. studies of pit initiation at single MnS inclusions in stainless steels: electrolytic polarization of stainless steels with MnS inclusions in NaCl soln.)
RN 11109-50-5 HCAPLUS
CN Iron alloy, base, Fe 66-74,Cr 18.00-20.00,Ni 8.00-10.50,Mn 0-2.00,Si 0-1.00,C 0-0.08,P 0-0.045,S 0-0.030 (UNS S30400) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Fe	66 - 74	7439-89-6
Cr	18.00 - 20.00	7440-47-3
Ni	8.00 - 10.50	7440-02-0
Mn	0 - 2.00	7439-96-5
Si	0 - 1.00	7440-21-3
C	0 - 0.08	7440-44-0
P	0 - 0.045	7723-14-0
S	0 - 0.030	7704-34-9

IT 7647-14-5, Sodium chloride, uses
RL: NUU (Nonbiological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(exptl. and theor. studies of pit initiation at single MnS inclusions in stainless steels: electrolytic polarization of stainless steels with MnS inclusions in NaCl soln.)

RN 7647-14-5 HCAPLUS
CN Sodium chloride (NaCl) (9CI) (CA INDEX NAME)

Cl-Na

RE.CNT 16
RE
(2) Castle, J; Corr Sci 1990, V30, P409 HCAPLUS
(3) Eklund, G; J Electrochem Soc 1974, V121, P467 HCAPLUS
(4) Eklund, G; Scandinavian Journal of Metallurgy 1972, V1, P331 HCAPLUS
(5) Georgiadou, M; J Electrochem Soc 1994, V141, P679 HCAPLUS
(6) Ke, R; J Electrochem Soc 1992, V139, P1573 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l28 2

L28 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:127463 HCAPLUS
DN 126:135593
TI Radiolabeled peptide compositions for site-specific targeting
IN Srinivasan, Ananthachari; Dyszlewski, Mary Marmion; Bugaj, Joseph E.
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

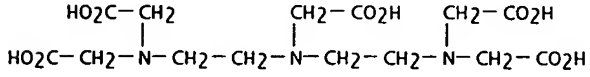
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640291	A1	19961219	WO 1996-US9384	19960606
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5830431	A	19981103	US 1995-480373	19950607
	CA 2224153	AA	19961219	CA 1996-2224153	19960606
	EP 831938	A1	19980401	EP 1996-922403	19960606
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	JP 11507342	T2	19990629	JP 1996-501714	19960606
	US 5804157	A	19980908	US 1997-989434	19971212
PRAI	US 1995-480373		19950607		
	WO 1996-US9384		19960606		

AB This invention relates to radiolabeled peptide compns. for radiopharmaceutical use and, more specifically, to radiolabeled peptides for diagnostic or therapeutic use having an unmodified carboxy terminal amino acid. The radiopharmaceutical compn. may be used for targeting a selected biol. site. The radiolabeled peptide is characterized by having its carboxy terminal amino acid in its carboxylic acid form and the peptide is coupled to a diagnostic or therapeutic radionuclide by a chelating agent. The radiopharmaceutical compn. preferably comprises a radiolabeled peptide selected from the group consisting of somatostatin, an analog of somatostatin, a deriv. of somatostatin and peptides capable of binding to the somatostatin receptor, where the peptide is coupled to a diagnostic or therapeutic radionuclide by a chelating agent has its carboxy terminal amino acid in its carboxylic acid form.

IT 51110-01-1, Somatostatin 51110-01-1D, Somatostatin, derivs.
RL: BPR (Biological process); PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(radiolabeled peptide compns. for site-specific targeting)
RN 51110-01-1 HCAPLUS
CN Somatostatin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 51110-01-1 HCAPLUS
CN Somatostatin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 67-43-6
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(radiolabeled peptide compns. for site-specific targeting)
RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 10043-49-9, Gold 198, biological studies 10098-91-6, Yttrium 90, biological studies 13967-64-1, Dysprosium 165, biological studies 13981-49-2, Tellurium 127, biological studies 14133-76-7, Technetium 99, biological studies 14191-64-1, Praseodymium 142, biological studies 14378-26-8, Rhenium 188, biological studies 14596-37-3, Phosphorus 32, biological studies 14683-06-8

, Tin 121, biological studies 14981-64-7, Palladium 109, biological studies 14981-79-4, Praseodymium 143, biological studies 14998-63-1, Rhenium 186, biological studies 15750-15-9, Indium 111, biological studies 15757-86-5, Copper 67, biological studies 15766-00-4, Samarium 153, biological studies 15840-13-8, Erbium 169, biological studies
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(radiolabeled peptide compns: for site-specific targeting)
RN 10043-49-9 HCAPLUS
CN Gold, isotope of mass 198 (8CI, 9CI) (CA INDEX NAME)

^{198}Au

RN 10098-91-6 HCAPLUS
CN Yttrium, isotope of mass 90 (8CI, 9CI) (CA INDEX NAME)

^{90}Y

RN 13967-64-1 HCAPLUS
CN Dysprosium, isotope of mass 165 (8CI, 9CI) (CA INDEX NAME)

^{165}Dy

RN 13981-49-2 HCAPLUS
CN Tellurium, isotope of mass 127 (8CI, 9CI) (CA INDEX NAME)

^{127}Te

RN 14133-76-7 HCAPLUS
CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

^{99}Tc

RN 14191-64-1 HCAPLUS
CN Praseodymium, isotope of mass 142 (8CI, 9CI) (CA INDEX NAME)

^{142}Pr

RN 14378-26-8 HCAPLUS
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

^{188}Re

RN 14596-37-3 HCAPLUS
CN Phosphorus, isotope of mass 32 (8CI, 9CI) (CA INDEX NAME)

^{32}P

RN 14683-06-8 HCAPLUS
CN Tin, isotope of mass 121 (8CI, 9CI) (CA INDEX NAME)

^{121}Sn

RN 14981-64-7 HCAPLUS
CN Palladium, isotope of mass 109 (8CI, 9CI) (CA INDEX NAME)

^{109}Pd

RN 14981-79-4 HCAPLUS
CN Praseodymium, isotope of mass 143 (8CI, 9CI) (CA INDEX NAME)

^{143}Pr

RN 14998-63-1 HCAPLUS
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

^{186}Re

RN 15750-15-9 HCAPLUS
CN Indium, isotope of mass 111 (8CI, 9CI) (CA INDEX NAME)

^{111}In

RN 15757-86-5 HCAPLUS
CN Copper, isotope of mass 67 (8CI, 9CI) (CA INDEX NAME)

^{67}Cu

RN 15766-00-4 HCAPLUS
CN Samarium, isotope of mass 153 (8CI, 9CI) (CA INDEX NAME)

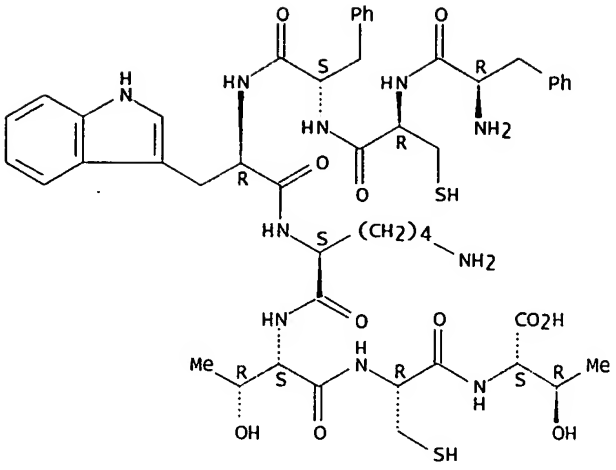
^{153}Sm

RN 15840-13-8 HCAPLUS
CN Erbium, isotope of mass 169 (8CI, 9CI) (CA INDEX NAME)

^{169}Er

IT 150957-56-5P 186464-64-2P 186464-65-3P
186464-66-4P 186464-68-6P 186464-69-7P
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant);
PREP (Preparation)
(radiolabeled peptide compns. for site-specific targeting)
RN 150957-56-5 HCAPLUS
CN L-Threonine, D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

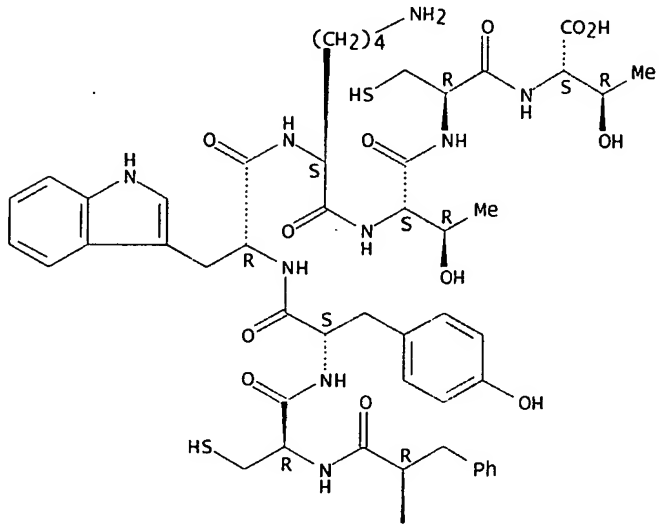
Absolute stereochemistry.



RN 186464-64-2 HCAPLUS
CN L-Threonine, D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

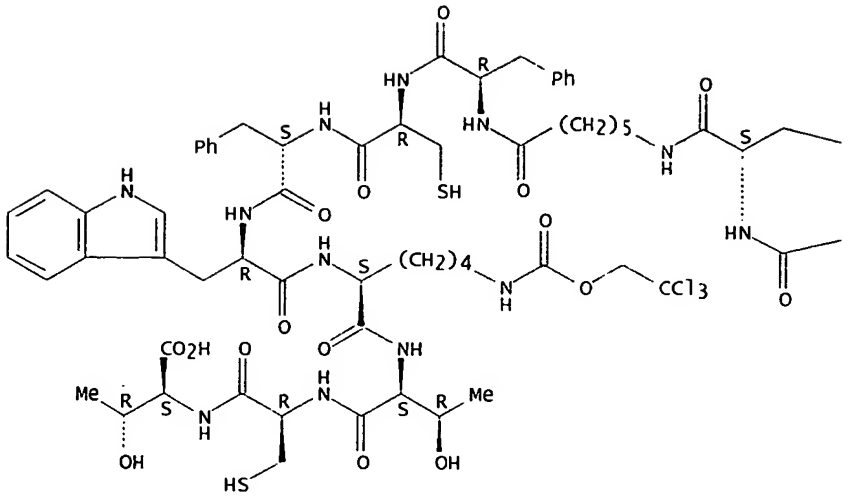


PAGE 2-A

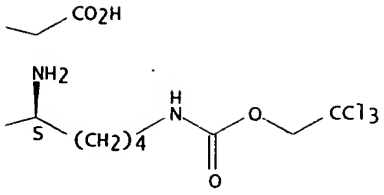
RN 186464-65-3 HCAPLUS
CN L-Threonine, N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



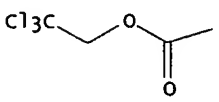
PAGE 1-B

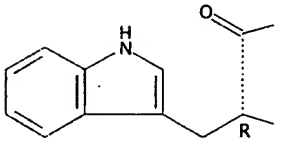


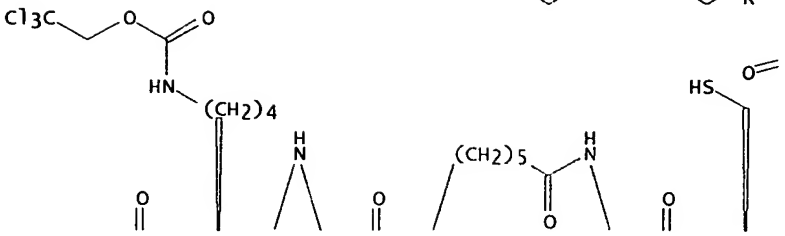
RN 186464-66-4 HCAPLUS
CN L-Threonine, N2-[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

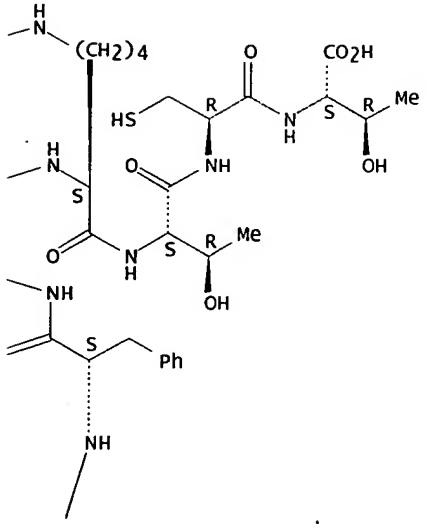
PAGE 1-A



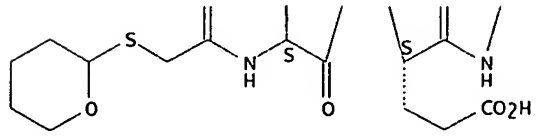


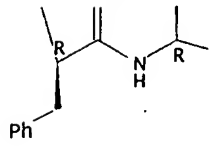


PAGE 1-B



PAGE 2-A



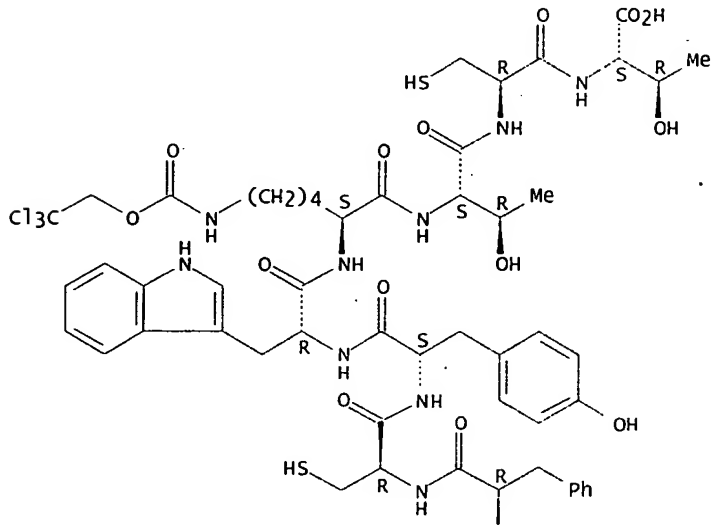


PAGE 2-B

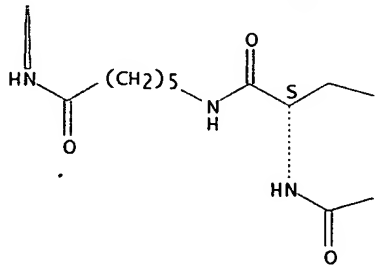
RN 186464-68-6 HCAPLUS
CN L-Threonine, N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

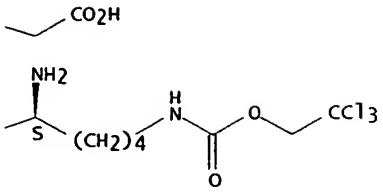
PAGE 1-A



PAGE 2-A



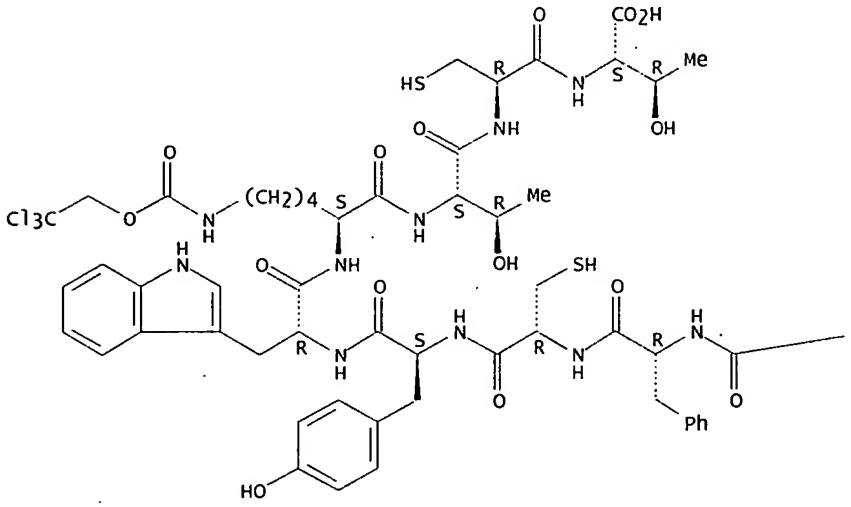
PAGE 2-B



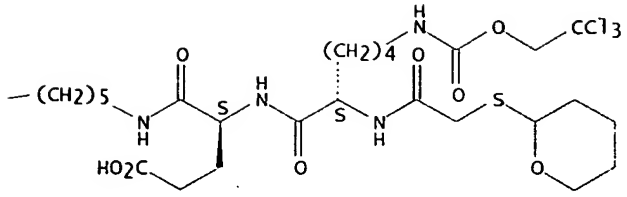
RN 186464-69-7 HCAPLUS
CN L-Threonine, N2-[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-N6-[(2,2,2-trichloroethoxy)carbonyl]-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



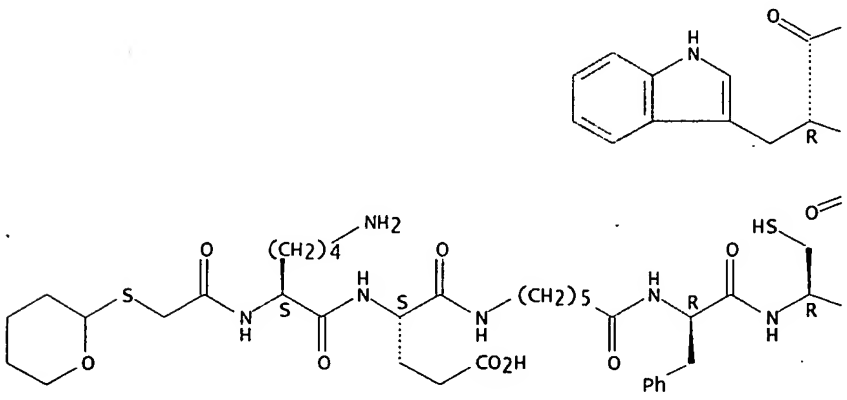
PAGE 1-B



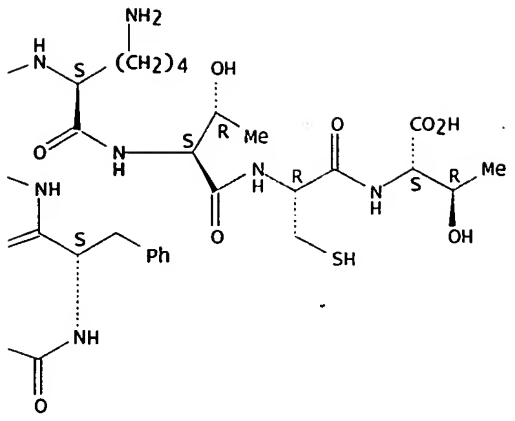
IT 186464-67-5P 186464-70-0P
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(radiolabeled peptide compns. for site-specific targeting)
RN 186464-67-5 HCAPLUS
CN L-Threonine, N2-[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



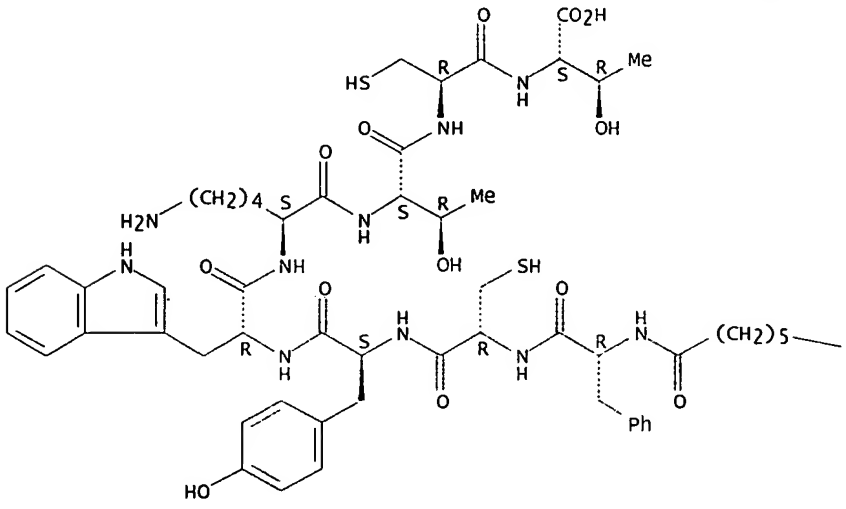
PAGE 1-B

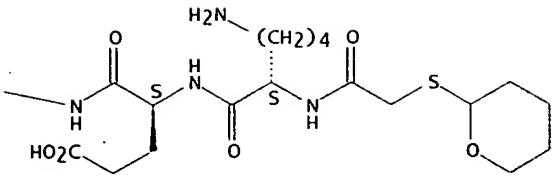


RN 186464-70-0 HCAPLUS
CN L-Threonine, N2-[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]-L-lysyl-L-.alpha.-glutamyl-6-aminohexanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteinyl- (9CI) (CA INDEX NAME)

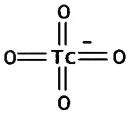
Absolute stereochemistry.

PAGE 1-A

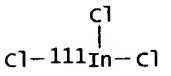




IT 14333-20-1 50800-85-6, Indium 111 chloride
71989-35-0 121557-45-7 186349-51-9
RL: RCT (Reactant)
(radiolabeled peptide compns. for site-specific targeting)
RN 14333-20-1 HCAPLUS
CN Technetate (TcO41-), (T-4)- (9CI) (CA INDEX NAME)

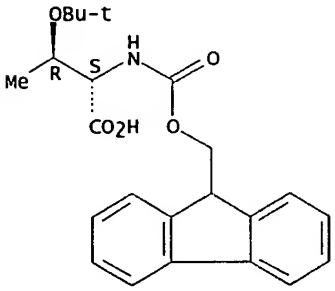


RN 50800-85-6 HCAPLUS
CN Indium chloride (111InCl3) (9CI) (CA INDEX NAME)

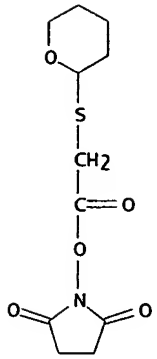


RN 71989-35-0 HCAPLUS
CN L-Threonine, O-(1,1-dimethylethyl)-N-[(9H-fluoren-9-ylmethoxy)carbonyl]-
(9CI) (CA INDEX NAME)

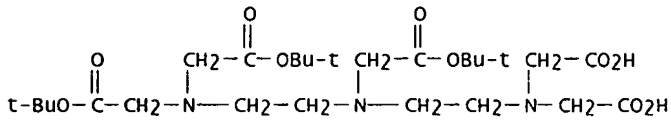
Absolute stereochemistry.



RN 121557-45-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[(tetrahydro-2H-pyran-2-yl)thio]acetyl]oxy]-
(9CI) (CA INDEX NAME)



RN 186349-51-9 HCAPLUS
CN 3-Oxa-6,9,12-triazatetradecan-14-oic acid, 12-(carboxymethyl)-6,9-bis[2-(1,1-dimethylethoxy)-2-oxoethyl]-2,2-dimethyl-4-oxo- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l28 3

L28 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:588573 HCAPLUS
DN 119:188573
TI Cyclic oligosaccharides for stabilization of radiopharmaceuticals
IN Derosch, Mark A.; Deutsch, Edward A.; Dyszlewski, Mary Marmion; Nosco, Dennis L.
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9315765	A1	19930819	WO 1993-US1196	19930209
	W: AU, BG, CA, FI, HU, JP, NO, PL, RO, RU				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5300280	A	19940405	US 1992-836644	19920214
	AU 9336624	A1	19930903	AU 1993-36624	19930209
	EP 625054	A1	19941123	EP 1993-905864	19930209
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
	HU 74566	A2	19970128	HU 1994-2349	19930209
	IL 104655	A1	19980615	IL 1993-104655	19930209
	ZA 9300949	A	19931207	ZA 1993-949	19930211
	NO 9402899	A	19940804	NO 1994-2899	19940804
	FI 9403724	A	19940812	FI 1994-3724	19940812
PRAI	US 1992-836644	19920214			
	WO 1993-US1196	19930209			

AB Cyclic oligosaccharides, e.g. cyclodextrins, are used for stabilization of radiopharmaceuticals. A kit contained a ligand capable of bonding to a radioisotope 20, tris(3-methoxypropyl)phosphine 1.5, Na2CO3 1.5, Na ascorbate 2.0, copper salt 0.24, and hydroxypropyl-.beta.-cyclodextrin 94.8%. The radiochem. purity after 2 wks at 50.degree. was 95.5 as compared to 8.30%.
IT 14133-76-7, Technetium-99, biological studies
RL: BIOL (Biological study)
(metastable, radiopharmaceuticals contg., stabilization of, with cyclic oligosaccharides)
RN 14133-76-7 HCAPLUS
CN Technetium, isotope of mass 99 (8CI, 9CI) (CA INDEX NAME)

^{99}Tc

IT 554-70-1 594-09-2 7784-42-1, Arsine
7803-51-2, Phosphine 14378-26-8, Rhenium-188, biological studies 14998-63-1, Rhenium-186, biological studies 23936-60-9 83622-85-9 125585-84-4
127502-06-1 142996-85-8 142996-86-9
142996-87-0 142996-88-1 142996-90-5
142996-92-7 142996-93-8 150565-57-4
RL: BIOL (Biological study)
(radiopharmaceuticals contg., stabilization of, with cyclic oligosaccharides)
RN 554-70-1 HCAPLUS
CN Phosphine, triethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 594-09-2 HCAPLUS
CN Phosphine, trimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 7784-42-1 HCAPLUS
CN Arsine (8CI, 9CI) (CA INDEX NAME)

AsH_3

RN 7803-51-2 HCAPLUS
CN Phosphine (6CI, 8CI, 9CI) (CA INDEX NAME)

PH_3

RN 14378-26-8 HCAPLUS
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

^{188}Re

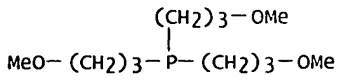
RN 14998-63-1 HCAPLUS
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

^{186}Re

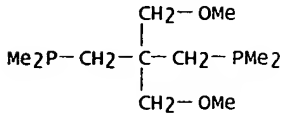
RN 23936-60-9 HCAPLUS
CN Phosphine, 1,2-ethanediylbis[dimethyl- (9CI) (CA INDEX NAME)

$Me_2P-CH_2-CH_2-PMe_2$

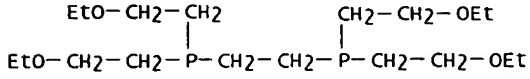
RN 83622-85-9 HCAPLUS
CN Phosphine, tris(3-methoxypropyl)- (9CI) (CA INDEX NAME)



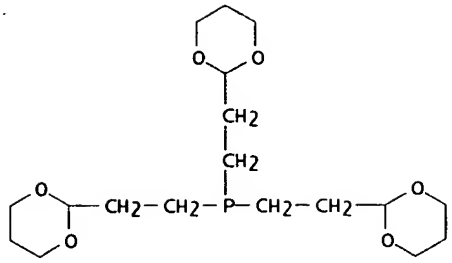
RN 125585-84-4 HCAPLUS
CN Phosphine, [2,2-bis(methoxymethyl)-1,3-propanediyl]bis[dimethyl- (9CI) (CA INDEX NAME)



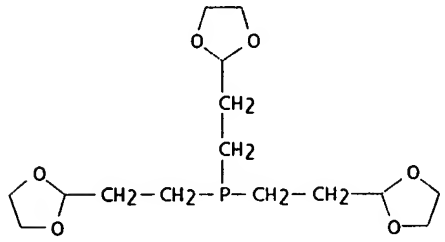
RN 127502-06-1 HCAPLUS
CN 3,12-Dioxa-6,9-diphosphatetradecane, 6,9-bis(2-ethoxyethyl)- (9CI) (CA INDEX NAME)



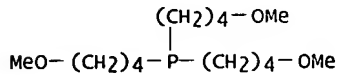
RN 142996-85-8 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



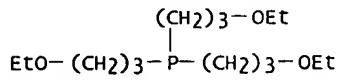
RN 142996-86-9 HCAPLUS
CN Phosphine, tris[2-(1,3-dioxolan-2-yl)ethyl]- (9CI) (CA INDEX NAME)



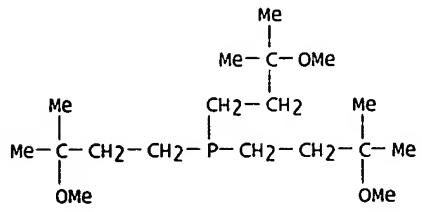
RN 142996-87-0 HCAPLUS
CN Phosphine, tris(4-methoxybutyl)- (9CI) (CA INDEX NAME)



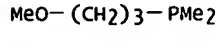
RN 142996-88-1 HCAPLUS
CN Phosphine, tris(3-ethoxypropyl)- (9CI) (CA INDEX NAME)



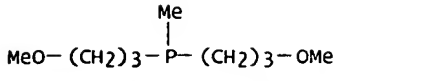
RN 142996-90-5 HCAPLUS
CN Phosphine, tris(3-methoxy-3-methylbutyl)- (9CI) (CA INDEX NAME)



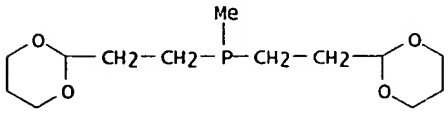
RN 142996-92-7 HCAPLUS
CN Phosphine, (3-methoxypropyl)dimethyl- (9CI) (CA INDEX NAME)



RN 142996-93-8 HCAPLUS
CN Phosphine, bis(3-methoxypropyl)methyl- (9CI) (CA INDEX NAME)



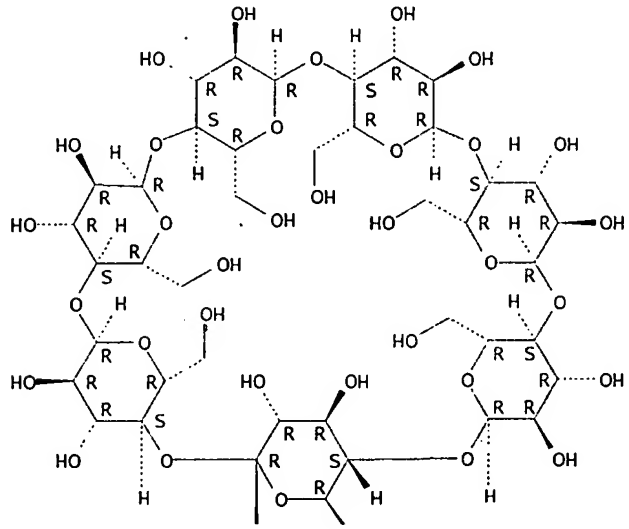
RN 150565-57-4 HCAPLUS
CN Phosphine, bis[2-(1,3-dioxan-2-yl)ethyl]methyl- (9CI) (CA INDEX NAME)



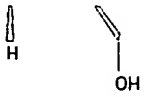
IT 7585-39-9, .beta.-Cyclodextrin 10016-20-3,
.alpha.-Cyclodextrin 10016-20-3D, .alpha.-Cyclodextrin,
Hydroxypropyl and hydroxyethyl ethers 12619-70-4, Cyclodextrin
17465-86-0, .gamma.-Cyclodextrin 51166-71-3,
2,6-Di-o-methyl-.beta.-cyclodextrin
RL: BIOL (Biological study)
(radiopharmaceuticals stabilization with)
RN 7585-39-9 HCAPLUS
CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

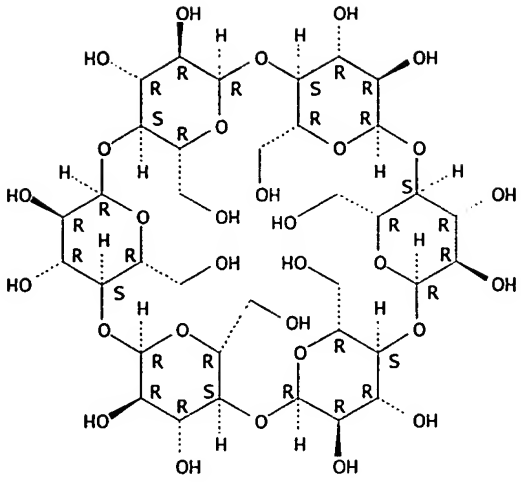


PAGE 2-A



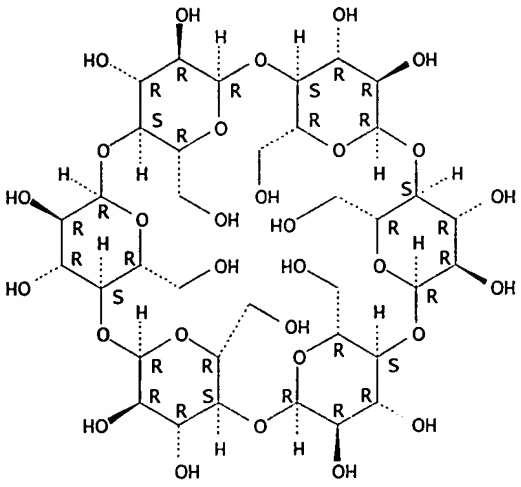
RN 10016-20-3 HCAPLUS
CN .alpha.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



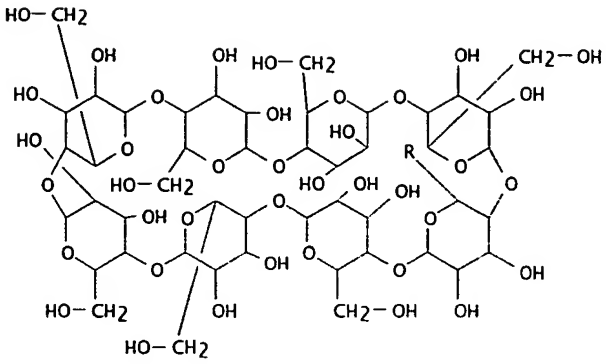
RN 10016-20-3 HCAPLUS
CN .alpha.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

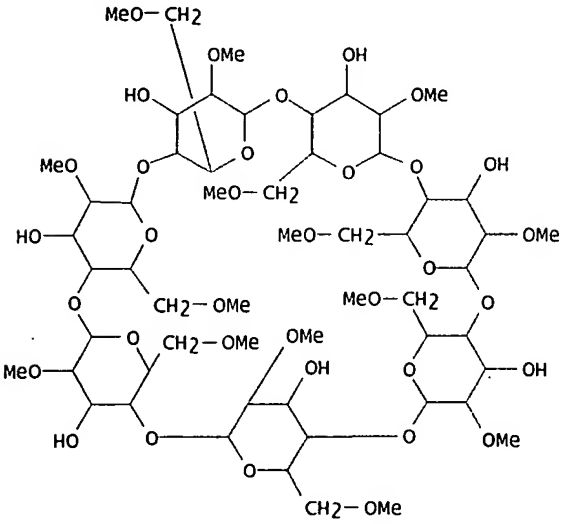


RN 12619-70-4 HCAPLUS
CN Cyclodextrin (9CI) (CA INDEX NAME)

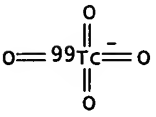
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 17465-86-0 HCAPLUS
CN .gamma.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)



RN 51166-71-3 HCAPLUS
CN .beta.-Cyclodextrin, 2A,2B,2C,2D,2E,2F,2G,6A,6B,6C,6D,6E,6F,6G-tetradeca-O-methyl- (9CI) (CA INDEX NAME)



IT 23288-60-0
RL: PROC (Process)
(stabilization of, with cyclic oligosaccharides)
RN 23288-60-0 HCAPLUS
CN Technetate (99TcO41-), sodium, (T-4)- (9CI) (CA INDEX NAME)



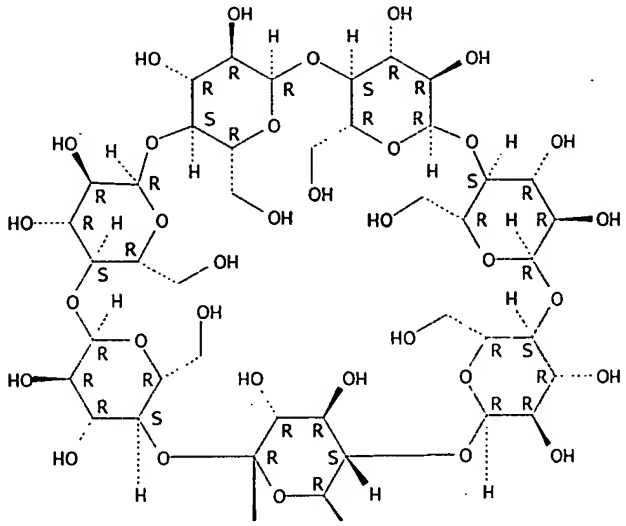
Na^+

IT 7585-39-9D, .beta.-Cyclodextrin, Hydroxypropyl, hydroxyethyl and

carboxymethyl ethers
RL: BIOL (Biological study)
(sulfated, radiopharmaceuticals stabilization with)
RN 7585-39-9 HCAPLUS
CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

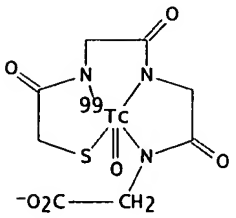
PAGE 1-A



PAGE 2-A

=> d bib abs hitstr l28 4

L28 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:490215 HCAPLUS
DN 119:90215
TI Technetium-99m MAG3: labeling conditions and quality control
AU Nosco, Dennis L.; Wolfangel, Robert G.; Bushman, Michael J.; Grummon, Glenn D.; Marmion, Mary E.; Pipes, David W.
CS Mallinckrodt Med. Inc., St. Louis, MO, 63034, USA
SO J. Nucl. Med. Technol. (1993), 21(2), 69-74
CODEN: JNMTB4; ISSN: 0091-4916
DT Journal
LA English
GI



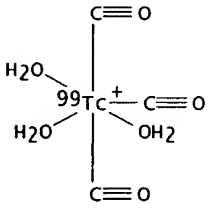
I

AB TechneScan MAG3 (I), a radiopharmaceutical kit developed by Mallinckrodt Medical Inc., St. Louis, MO, for use in the evaluation of renal tubular function, was tested under a variety of labeling conditions. The effects of varying time (0-30 min) and heating temp. (90.degree.-110.degree.), technetium-99m activity (0-150 mCi) and vol. (4-10 mL), timing and vol. (0-10 mL) of air addn. to the kit, and age of generator eluate (0-12 h) used in reconstitution were examd. Anal. of the results from the above expts. show that, when used within the parameters described in the package insert, the reconstituted TechneScan MAG3 kit gives acceptable radiochem. purity (i.e., >90%) every time. Of special note, results from these studies indicate that 99mTc generator eluate which has stood for >6 h after elution should not be used to label the kits. A novel quality control method using a C18 Sep Pak (Millipore Corp., Milford, MA) is described. This method is easy and quick to perform and gives excellent accuracy, with results similar to those obtained using high performance liq. chromatog.
IT 7440-26-8P, Technetium, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and quality control of metastable, kidney scintigraphy in relation to)
RN 7440-26-8 HCAPLUS
CN Technetium (8CI, 9CI) (CA INDEX NAME)

Tc

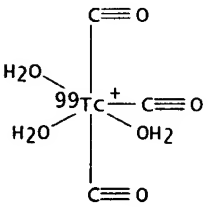
=> d bib abs hitstr l47 1

L47 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:614935 HCAPLUS
DN 133:316824
TI Synthesis of [Tc(CO)3(H2O)3]+ ion and study of its reaction with hydroxyl ion in aqueous solutions
AU Gorshkov, N. I.; Lumpov, A. A.; Miroslavov, A. E.; Suglobov, D. N.
CS Khlopin Radium Institute, Research and Production Association, St. Petersburg, Russia
SO Radiochemistry (Moscow) (2000), 42(3), 231-235
CODEN: RDIOEO; ISSN: 1066-3622
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
AB Two procedures for prepn. of [Tc(CO)3(H2O)3]+ complex in aq. solns. are discussed: (1) dissoln. of Tc(CO)5X (X = Cl, Br, I) in hot H2O and (2) carbonylation of KTcO4 in an aq. soln. in an autoclave. Reaction of [Tc(CO)3(H2O)3]+ with hydroxyl ion was studied by 99Tc NMR spectroscopy and potentiometry. At the ratio OH/Tc < 1, [Tc(CO)3(H2O)2(OH)] monomer is formed, which polymerizes with time to give the dimer [Tc(CO)3(H2O)(OH)]2 and then the tetramer [Tc(CO)3(OH)]4. At OH/Tc > 1 the polymn. is sharply decelerated. A complex with hypothetical compn. [Tc(CO)3(H2O)(OH)2]- is formed along with the monohydroxo complex at NaOH concn. >1.5 M.
IT 301661-20-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrolysis in aq. soln.)
RN 301661-20-1 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, chloride, (OC-6-22)- (9CI) (CA INDEX NAME)



● Cl⁻

IT 163932-31-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with hydroxyl ion in aq. soln.)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)

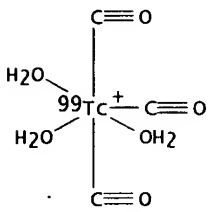


RE.CNT 10
RE
(1) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS
(2) Alberto, R; Polyhedron 1998, V17(7), P1133 HCAPLUS
(6) Egli, A; Organometallics 1997, V16, P1833 HCAPLUS
(7) Miroslavov, A; Radiokhimiya 1989, V31(6), P33 HCAPLUS

(8) Miroslavov, A; Radiokhimiya 1990, V32(6), P14 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l47 2

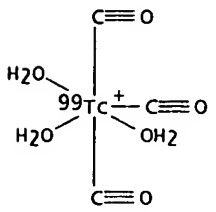
L47 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:572987 HCAPLUS
DN 133:290298
TI EXAFS analyses of technetium(I) carbonyl complexes - stability studies in solutions
AU Seifert, S.; Kunstler, J.-U.; Gupta, A.; Funke, H.; Reich, T.; Hennig, C.; Rossberg, A.; Pietzsch, H.-J.; Alberto, R.; Johannsen, B.
CS Research Center Rossendorf, Institute of Bioinorganic and Radiopharmaceutical Chemistry, Dresden, D-01314, Germany
SO Radiochim. Acta (2000), 88(3-4), 239-245
CODEN: RAACAP; ISSN: 0033-8230
PB R. Oldenbourg Verlag
DT Journal
LA English
AB EXAFS analyses were successfully used to det. the structure of Re and Tc carbonyl thioether complexes in solid and liq. samples. In connection with chromatog. and mass spectrometric methods the behavior of Tc carbonyl dithioether complexes in aq. soln. was studied. Complexes contg. a bidentate thioether ligand are able to react with H2O by exchange of the chloride ion, which gave a cationic complex with pseudo first order aquation kinetics. As expected, the exchange proceeds faster at the no-carier-added level because of concn. differences.
IT 163932-31-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of metastable)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 23
RE
(2) Abel, E; Polyhedron 1995, V14, P585 HCAPLUS
(3) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS
(4) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS
(5) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS
(6) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l47 3

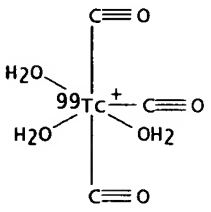
L47 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:222269 HCAPLUS
DN 133:55391
TI Influence of the Denticity of Ligand Systems on the in Vitro and in Vivo Behavior of 99mTc(I)-Tricarbonyl Complexes: A Hint for the Future Functionalization of Biomolecules
AU Schibli, Roger; La Bella, Roberto; Alberto, Roger; Garcia-Garayoa, Elisa; Ortner, Kirstin; Abram, Ulrich; Schubiger, P. A.
CS Center for Radiopharmaceutical Science of the ETH Zuerich, Paul Scherrer Institute, Villigen, CH-5232, Switz.
SO Bioconjugate Chem. (2000), 11(3), 345-351
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB Functionalization of biol. relevant mols. for the labeling with the novel fac-[99mTc(OH2)3(CO)3]+ precursor has gained considerable attention recently. Therefore, we tested seven different tridentate (histidine L1, iminodiacetic acid L2, N-2-picolylamineacetic acid L3, N,N-2-picolylaminediacetic acid L4) and bidentate (histamine L5, 2-picolinic acid L6, 2,4-dipicolinic acid L7) ligand systems, with the potential to be bifunctionalized and attached to a biomol. The ligands allowed mild radiolabeling conditions with fac-[99mTc(OH2)3(CO)3]+ (30 min, 75 .degree.C). The ligand concns. necessary to obtain yields of >95% of the corresponding organometallic complexes 1-7 ranged from 10-6 to 10-4 M. Complexes of the general formula "fac-[99mTcL(CO)3]" (L = tridentate ligand) and "fac-[99mTc(OH2)L'(CO)3]" (L' = bidentate ligand), resp., were produced. Challenge studies with cysteine and histidine revealed significant displacement of the ligands in complexes 5-7 but only little exchange with complexes 1-4 after 24 h at 37 .degree.C in PBS buffer. However, no decompn. to 99mTcO4- was obsd. under these conditions. All complexes showed a hydrophilic character (log Po/w values ranging from -2.12 to 0.32). Time-dependent FPLC analyses of compds. 1-7 incubated in human plasma at 37 .degree.C showed again no decompn. to 99mTcO4- after 24 h at 37 .degree.C. However, the complexes with bidentate ligands (5-7) became almost completely protein bound after 60 min, whereas the complexes with tridentate coordinated ligands (1-4) showed no reaction with serum proteins. The compds. were tested for their in vivo stability and the biodistribution characteristics in BALB/c mice. The complexes with tridentate coordinated ligand systems (1-4) revealed generally a good and fast clearance from all organs and tissues. On the other hand, the complexes with only bidentate coordinated ligands (5-7) showed a significantly higher retention of activity in the liver, the kidneys, and the blood pool. Detailed radiometric analyses of murine plasma samples, 30 min p.i. of complex fac-[99mTcL1(CO)3], 1, revealed almost no reaction of the radioactive complex with the plasma proteins. By contrast, in plasma samples of mice, which were injected with complex fac-[99mTc(OH2)L5(CO)3]+, 5, the entire radioactivity coeluded with the proteins. On the basis of these in vitro and in vivo expts., it appears that functionalization of biomols. with tridentate-chelating ligand systems is preferable for the labeling with fac-[99mTc(OH2)3(CO)3]+, since this will presumably result in radioactive bioconjugates with better pharmacokinetic profiles.
IT 163932-31-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn., properties and biodistribution of 99mTc tricarbonyl complexes)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 20
RE
(2) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS
(3) Alberto, R; J Am Chem Soc 1999, V121, P6076 HCAPLUS
(4) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS
(5) Alberto, R; Transition Met Chem 1997, V22, P597 HCAPLUS
(7) Costello, C; J Nucl Med 1983, V24, P353 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l47 4

L47 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:581733 HCAPLUS
DN 132:191251
TI In vitro and in vivo evaluation of bidentate, water-soluble phosphine ligands as anchor groups for the organometallic fac-[99mTc(CO)3]+-core
AU Schibli, R.; Katti, K. V.; Higginbotham, C.; Volkert, W. A.; Alberto, R.
CS Departments of Department of Radiology, University of Missouri-Columbia, Columbia, MO, USA
SO Nucl. Med. Biol. (1999), 26(6), 711-716
CODEN: NMBIEO; ISSN: 0969-8051
PB Elsevier Science Inc.
DT Journal
LA English
AB Complexes fac-[99mTc(OH2)(CO)3L]+ [L = bis(bis(hydroxymethyl)phosphino)ethane or bis(bis(hydroxymethyl)phosphino)benzene] were prepd. No decompn. or alteration of the complexes was obsd. even in the presence of excess histidine, cysteine, or human serum albumin. Expts. performed in normal mice demonstrated a fast clearance of the complexes from the blood pool and clearance through the hepatobiliary and the urinary pathways.
IT 163932-31-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(synthesis, properties and biodistribution of 99mTc hydroxymethylphosphine complexes)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 23
RE
(1) Abram, U; Inorg Chim Acta 1989, V160, P139 HCAPLUS
(3) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS
(5) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS
(6) Alberto, R; Radiochim Acta 1997, V79, P99 HCAPLUS
(8) Berning, D; Inorg Chem 1997, V36, P2765 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

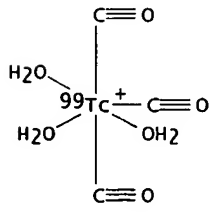
=> d bib abs hitstr l47 5

L47 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:719299 HCAPLUS
DN 130:1842
TI Method for the preparation of facial metal tricarbonyl compounds and their use in the labeling of biologically active substrates
IN Alberto, Roger; Schibli, Roger; Egli, Andre
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9848848	A1	19981105	WO 1998-US7979	19980421
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 879606	A1	19981125	EP 1997-201232	19970425
	R: CH, LI, NL				
	AU 9871413	A1	19981124	AU 1998-71413	19980421
	BR 9809409	A	20000613	BR 1998-9409	19980421
	EP 1019095	A1	20000719	EP 1998-918501	19980421
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	NO 9905160	A	19991213	NO 1999-5160	19991022
PRAI	EP 1997-201232	19970425			
	WO 1998-US7979	19980421			

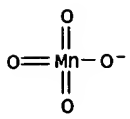
AB A method is disclosed for prepg. fac-[M(CO)3(OH2)3]+ (M = Mn, 99mTc, 186Re, 188Re) (I) by reacting a metal in the permetallate form with carbon monoxide and a reducing agent, characterized in that a mixt. of a base, a reducing agent sol. in water but not substantially decompd. by water, and optionally a stabilizing agent, is solved in a water-contg. solvent system contg. a soln. of the metal in the permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide and optionally in the presence of a halide. Also disclosed are to a method of prepg. a labeled compd. with the aid of the compd. I, a method of direct prepn. of labeled compds., a method of labeling of substrates (e.g. amino acids, peptides, proteins, sugars, small receptor binding mols. and body cells) with the aid of compd. I, a kit for the prepn. of a labeling compn., and a kit for the prepn. of a diagnostic of therapeutic pharmaceutical compn.

IT 163932-31-8P
RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)

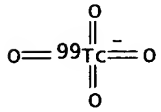


IT 14333-13-2, Permanganate 23288-61-1, 99Tc-Pertechnetate 87552-16-7, 186Re-perrhenate
RL: RCT (Reactant)
(reaction; facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)
RN 14333-13-2 HCAPLUS

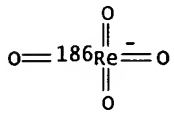
CN Permanganate (MnO41-) (8CI, 9CI) (CA INDEX NAME)



RN 23288-61-1 HCAPLUS
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)



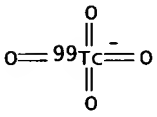
RN 87552-16-7 HCAPLUS
CN Rhenate (186ReO41-), (T-4)- (9CI) (CA INDEX NAME)



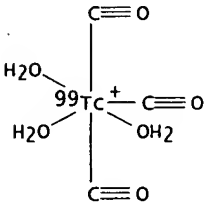
RE.CNT 8
RE
(1) Bamford, C; J CHEM SOC DALTON TRANS 1978, 1, P4 HCAPLUS
(2) Beck, W; J ORGANOMET CHEM 1980, V191(1), P73 HCAPLUS
(3) Centre Nat Rech Scient; EP 0105785 A 1984 HCAPLUS
(4) Egli, A; Hydrolysis of the Organometallic Aqua Ion fac-Triaquatricarbonylrhenium(I) Mechanism, pKa, and Formation Constants of the Polynuclear Hydrolysis Products 1997, 18, HCAPLUS
(5) Egli, A; ORGANOMETALLICS 1997, V16(9), P1833 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l47 6

L47 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:496528 HCAPLUS
DN 129:183425
TI A Novel Organometallic Aqua Complex of Technetium for the Labeling of Biomolecules: Synthesis of [99mTc(OH2)3(CO)3]+ from [99mTcO4]- in Aqueous Solution and Its Reaction with a Bifunctional Ligand
AU Alberto, Roger; Schibli, Roger; Egli, Andre; Schubiger, August P.; Abram, Ulrich; Kaden, Thomas A.
CS Division of Radiopharmacy, Paul Scherrer Institute, Villigen, CH-5232, Switz.
SO J. Am. Chem. Soc. (1998), 120(31), 7987-7988
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB [99mTc(CO)3(OH2)3]+, readily formed from [99Tc(CO)3Cl3]2- in H2O, was prepd. from 99mTcO4- and CO in THF and in saline soln. with small amts. of NaBH4 as reducing agent. [188ReO4]- reacted similarly. [99Tc(CO)3Cl3]2- or [99Tc(CO)3(OH2)3]+reacted with picolinamine-N,N-diacetic acid (HPADA) to give [99Tc(CO)3(PADA)] (I). I is orthorhombic, space group Pbca, a 13.225(1), b 14.660(1), c 14.942(2) .ANG., Z = 8, R = 0.0386, Rw = 0.1082. In H2O I is readily converted to [99Tc(CO)3(OH2)3]+. I is stable in serum.
IT 23288-61-1
RL: RCT (Reactant)
(for prepn. of technetium carbonyl aqua/picolinaminediacetate complexes)
RN 23288-61-1 HCAPLUS
CN Technetate (99TcO41-), (T-4)- (9CI) (CA INDEX NAME)

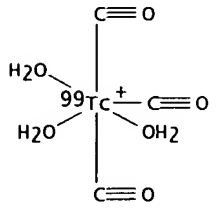


IT 163932-31-8P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation)
(formation and reaction with picolinamine-N,N-diacetic acid)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



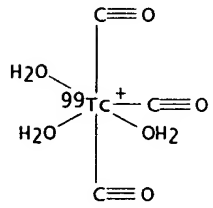
=> d bib abs hitstr l47 7

L47 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:328490 HCAPLUS
DN 129:109175
TI Steps towards [(C5Me5)TcO3]: novel synthesis of [(C5Me5)Tc(CO)3] from [{Tc(.mu.3-OH)(CO)3}4] and oxidation of [(C5Me5)M(CO)3] (M = Tc, Re) with Br2
AU Alberto, Roger; Schibli, Roger; Egli, Andre; Abram, Ulrich; Abram, Sonja; Kaden, Thomas A.; Schubiger, P. August
CS Division of Radiopharmacy, Paul Scherrer Institute, Villigen, CH-5232, Switz.
SO Polyhedron (1998), 17(7), 1133-1140
CODEN: PLYHDE; ISSN: 0277-5387
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 129:109175
AB [NEt4]2[Tc(Cl)3(CO)3] was prepd. directly from [NBu4][TcO4]. Dissoln. of [NEt4]2[Tc(Cl)3(CO)3] in H2O yielded the aqua ion [Tc(OH2)3(CO)3]+ which, upon titrn. with 1 equiv of OH-, gave tetranuclear [{Tc(.mu.3-OH)(CO)3}4] in quant. yield and of which the structure could be elucidated by x-ray crystallog. Reaction of [{Tc(.mu.3-OH)(CO)3}4] with HC5Me5 gave the important starting material [(C5Me5)M(CO)3] (M = Tc, Re). To achieve complexes in higher oxidn. states with the C5Me5- ligand, oxidn. was performed with [Br2] for the Re and the corresponding Tc complex. Oxidn. in HO2CCF3 yielded cis/trans-[(C5Me5)M(Br)2(CO)2] (M = Tc, Re). Oxidn. in CH2Cl2 gave in both cases the seven coordinate, 18e- M(III) complex [(C5Me5)MBr(CO)3]+. The structure of the Re complex was elucidated. Oxidn. took place at the metal center and the C5Me5- ring to yield [(CO)3M(.mu.-Br)3M(CO)3] as the counterion.
IT 163932-31-8P, fac-Triaquatricarbonyltechnetium(1+)-99Tc
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deprotonation of)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l47 8

L47 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:190636 HCAPLUS
DN 128:289372
TI Rhenium and technetium carbonyl complexes for the labeling of bioactive molecules. Part 4. N.c.a. preparation of a 99mTc carbonyl complex as a potential serotonin 5-HT2A receptor binding ligand
AU Reisgys, M.; Pietzsch, H. J.; Spies, H.; Alberto, R.
CS Institute Bioinorganic Radiopharmaceutical Chemistry, Research Center Rossendorf Inc., Dresden, D-01314, Germany
SO Forschungszent. Rossendorf, [Ber.] FZR (1997), FZR-200, 20-22
CODEN: FRBFEU
DT Report
LA English
AB Some Re and Tc carbonyl thioether complexes were reported with a potential affinity to serotonin receptors and expts. were described to prep. the Tc complexes at the n.c.a. level.
IT 163932-31-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(for prepn. of 99mTc carbonyl complex as potential serotonin 5HT2A receptor binding ligand)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)

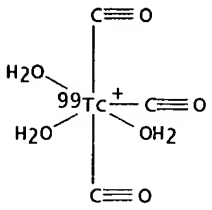


=> d bib abs hitstr l48 2

L48 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:518635 HCAPLUS
DN 133:91484
TI Method of preparing water-soluble carbonyl complexes of short-lived technetium(I) and rhenium(I)
IN Gorshkov, N. I.; Lumpov, A. A.; Miroslavov, A. E.; Suglobov, D. N.
PA Nauchno-Proizvodstvennoe Ob'edinenie "Radievyi Institut im. V. G. Khlopina, Russia
SO Russ.
From: Izobreteniya 1999, (2), 431.
CODEN: RUXXE7
DT Patent
LA Russian
FAN.CNT 1

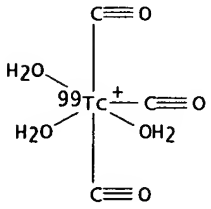
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI RU 2125017	C1	19990120	RU 1997-110991	19970702

AB Title only translated.
IT 163932-31-8
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(prepg. water-sol. carbonyl complexes of short-lived technetium(I) and rhenium(I))
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



=> d bib abs hitstr 148 4

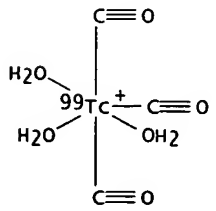
L48 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:289820 HCAPLUS
DN 133:331673
TI Chemical and biological characterization of technetium(I) and rhenium(I) tricarbonyl complexes with dithioether ligands serving as linkers for coupling the "Tc(CO)3" and "Re(CO)3" moieties to biologically active molecules
AU Pietzsch, H.-J.; Gupta, A.; Reisgys, M.; Drews, A.; Seifert, S.; Syhre, R.; Spies, H.; Alberto, R.; Abram, U.; Schubiger, P. A.; Johannsen, B.
CS Abteilung fur Radiopharmazie, Paul-Scherrer-Inst., Villigen, Switz.
SO Wiss.-Tech. Ber. - Forschungszent. Rossendorf (1999), FZR-283, 89-93
CODEN: WBFRFQ; ISSN: 1437-322X
DT Report
LA English
AB The oxidn. state +1 of technetium has been only examd. in a minor way before a new approach to inert technetium compds. on the basis of Tc(I) carbonyl complexes has been elaborated. Intensive studies in the technetium carbonyl chem. have made available an organometallic Tc(I) aqua ion, [Tc(H2O)3(CO)3]+, from TcO4- under normal pressure. Therefore, the prerequisite to exploit the small [Tc(CO)3]+ moiety for the labeling of biomols. is given. Thioethers with the .pi.-acceptor properties of the sulfur show a great potential for coordinating at the metal(I) carbonyl center and several rhenium carbonyl complexes with thioether ligands are known. They may serve in an alternative approach to fully exploit the potential of the [M(CO)3]+ moiety (M = Tc, Re) for the design of radiotracers. The basic chem. of the Tc(I)/Re(I) carbonyl thioethers is described with particular emphasis on applicability to radiotracer design.
IT 163932-31-8
RL: RCT (Reactant)
(prepn. and chem. and biol. characterization of technetium(I) and rhenium(I) tricarbonyl complexes with dithioether ligands serving as linkers for coupling the metal tricarbonyl moieties to biol. active mols.)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 7
RE
(1) Alberto, R; J Organomet Chem 1995, V493, P119 HCAPLUS
(3) Alberto, R; Topics in Current Chemistry 1996, V176, P149 HCAPLUS
(4) Alberto, R; Trans Met Chem 1997, V22, P597 HCAPLUS
(5) Egli, A; Organometallics 1997, V16, P1833 HCAPLUS
(6) Schibli, R; Inorg Chem 1998, V37, P3509 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l48 5

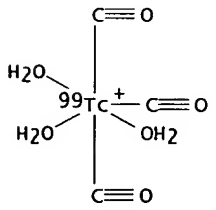
L48 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:205407 HCAPLUS
DN 132:329035
TI Chemical and Biological Characterization of Technetium(I) and Rhenium(I) Tricarbonyl Complexes with Dithioether Ligands Serving as Linkers for Coupling the Tc(CO)3 and Re(CO)3 Moieties to Biologically Active Molecules
AU Pietzsch, H.-J.; Gupta, A.; Reisgys, M.; Drews, A.; Seifert, S.; Syhre, R.; Spies, H.; Alberto, R.; Abram, U.; Schubiger, P. A.; Johannsen, B.
CS Institut fuer Bioanorganische und Radiopharmazeutische Chemie, Forschungszentrum Rossendorf, Dresden, D-01314, Germany
SO Bioconjugate Chem. (2000), 11(3), 414-424
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB The organometallic precursor (NEt4)2[ReBr3(CO)3] was reacted with bidentate dithioethers (L) H3CSCH2CH2SR (R = CH2CH2COOH, CH2C.tplbond.CH) and R'SCH2CH2SR' (R' = CH3CH2, CH3CH2OH, and CH2COOH) in MeOH to form stable Re(I) tricarbonyl complexes [ReBr(CO)3L]. Under these conditions, the functional groups do not participate in the coordination. As a prototypic representative of this type of Re compds., the propargylic group bearing complex [ReBr(CO3)(H3CSCH2CH2SCH2C.tplbond.CH)] Re2 was studied by x-ray diffraction anal. Its mol. structure exhibits a slightly distorted octahedron with facial coordination of the carbonyl ligands. The potentially tetradentate ligand HOCH2CH2SCH2CH2SCH2CH2OH was reacted with [Re(NO3)3(CO)3]2- to yield a cationic complex [Re(CO)3(HOCH2CH2SCH2CH2SCH2CH2OH)]NO3 Re8 which shows the coordination of one hydroxy group. Re8 was characterized by correct elemental anal., IR spectroscopy, capillary electrophoresis, and x-ray diffraction anal. Ligand exchange reaction of the carboxylic group bearing ligands H3CSCH2CH2SCH2CH2COOH and HOOCCH2SCH2CH2SCH2COOH with (NEt4)2[ReBr3(CO)3] in H2O and with equimolar amts. of NaOH led to complexes in which the bromide is replaced by the carboxylic group. The x-ray structure anal. of [Re(CO)3(OOCCH2SCH2CH2SCH2COOH)] Re6 shows the 2nd carboxylic group noncoordinated offering an ideal site for functionalization or coupling a biomol. The no-carrier-added prepn. of the analogous 99mTc(I) carbonyl thioether complexes could be performed using the precursor fac-[99mTc(H2O)3(CO)3]+, with yields up to 90%. The behavior of the Cl contg. 99mTc complex [99mTcCl(CO)3(CH3CH2SCH2CH2SCH2CH3)] Tc1 in aq. soln. at physiol. pH value was studied. In saline, the chromatog. sepd. compd. was stable for at least 120 min However, in chloride-free aq. soln., a H2O-coordinated cationic species Tc1a of the proposed compn. [99mTc(H2O)(CO)3(CH3CH2SCH2CH2SCH2CH3)]+ occurred. The cationic charge of the conversion product was confirmed by capillary electrophoresis. By the introduction of a carboxylic group into the thioether ligand as a 3rd donor group, the conversion could be suppressed and thus the neutrality of the complex preserved. Biodistribution studies in the rat demonstrated for the neutral complexes [99mTcCl(CO)3(CH3CH2SCH2CH2SCH2CH3)] Tc1 and [99mTcCl(CO)3(CH2SCH2CH2SCH2C.tplbond.CH)] Tc2 a significant initial brain uptake (1.03 .+-. 0.25% and 0.78 .+-. 0.08% ID/organ at 5 min p.i.). Challenge expts. with glutathione clearly indicated that no transchelation reaction occurs in vivo.
IT 163932-31-8
RL: RCT (Reactant)
(reactant for prepn. of rhenium/technetium-99m thioether carbonyl complexes)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 62
RE
(2) Abel, E; Polyhedron 1995, V14, P585 HCAPLUS
(3) Abram, U; Inorg Chim Acta 1996, V248, P193 HCAPLUS
(4) Abram, U; Polyhedron 1998, V17, P1303 HCAPLUS
(5) Adams, R; Organometallics 1995, V14, P1748 HCAPLUS
(6) Alberto, R; J Am Chem Soc 1998, V120(31), P7987 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l48 7

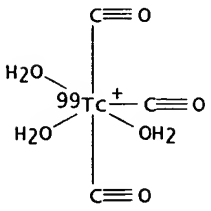
L48 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:775044 HCAPLUS
DN 132:233705
TI Organometallic 99mTc-aquaion labels peptide to an unprecedented high specific activity
AU Egli, Andre; Alberto, Roger; Tannahill, Lesley; Schibli, Roger; Abram, Ulrich; Schaffland, Andreas; Waibel, Robert; Tourwe, Dirk; Jeannin, Lauren; Iterbeke, Koen; Schubiger, P. August
CS Center for Radiopharmaceutical Science, Paul Scherrer Institute, Villigen-PSI, CH-5232, Switz.
SO J. Nucl. Med. (1999), 40(11), 1913-1917
CODEN: JNMEAQ; ISSN: 0161-5505
PB Society of Nuclear Medicine, Inc.
DT Journal
LA English
AB A new peptide labeling method that uses the organometallic aquaion [99mTc(H2O)3(CO)3]+ has been developed. Methods: A selection of amino acids was labeled at different concns. with the organometallic aquaion, and the labeling yield was detd. by high-performance liq. chromatog. This investigation has shown histidine to be a very potent ligand, with specific activities of up to 6 TBq/.mu.mol (160 Ci/.mu.mol) ligand. Histidine derivs. have been coupled to neurotensin(8-13) (NT[8-13]) and have been labeled with the aquaion, resulting in high specific activities with (N.alpha.-histidinyl)acetic acid-NT(8-13) similar to those with histidine. Results: Histidine derivs. of NT(8-13) labeled using this approach fully retained their receptor affinity, showing KD values of all investigated NT analogs below 1 nmol/L on colon carcinoma HT29 cells. Biodistribution expts. in BALB/c mice showed complete clearance of (N.alpha.-histidinyl)acetic acid-NT(8-13) from the blood after 24 h and no unwanted accumulation in any tissue. Conclusion: The novel labeling method using the organometallic 99mTc-aquaion combines the advantage of highest specific activities with minimal functionalization of proteins and peptides under retention of biol. affinity.
IT 163932-31-8D, amino acids and peptides labeled with
RL: BPR (Biological process); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(peptide labeling with 99mTc-aquaion and biodistribution)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 17
RE
(1) Abrams, M; Inorg Chem 1983, V22, P2798 HCAPLUS
(2) Alberto, R; J Am Chem Soc 1998, V120, P7987 HCAPLUS
(3) Alberto, R; J Chem Soc Dalton Trans 1994, P2815 HCAPLUS
(5) Alberto, R; Polyhedron 1996, V15, P1079 HCAPLUS
(6) Alberto, R; Radiochim Acta 1997, V79, P99 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l48 8

L48 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:555392 HCAPLUS
DN 123:24574
TI Metal carbonyl syntheses XXII. Low pressure carbonylation of [MOCl4]- and [MO4]-: the technetium(I) and rhenium(I) complexes [NEt4]2[MCl3(CO)3]
AU Alberto, Roger; Schibli, Roger; Egli, Andre; Schubiger, P. August; Herrmann, Wolfgang A.; Artus, Georg; Abram, Ulrich; Kaden, Thomas A.
CS Division of Radiopharmacy, Paul Scherrer Institut, Villigen, CH-5232, Switz.
SO J. Organomet. Chem. (1995), 493(1-2), 119-27
CODEN: JORCAI; ISSN: 0022-328X
DT Journal
LA English
AB Low pressure carbonylation (1 atm) of [MOCl4]- or [MO4]- in the presence of BH3-THF and halides X- results in the clean formation of [NEt4]2[MX3(CO)3] contg. monovalent Re or Tc (M = Re or Tc; X = Cl or Br). In the case of the radioactive element Tc this low pressure synthesis is an important progress since potential hazards of traditional high pressure carbonylations are thus avoided. [NEt4]2[ReBr3(CO)3] crystallizes in the space group P.hivin.1 with a 10.166(2), b 16.393(4), c 17.243(5) .ANG., and .alpha. 69.27(2), .beta. 86.42(2), .gamma. 88.61(2).degree., Z = 4 and V = 2682(1) .ANG.3. [NEt4][MX3(CO)3] is a versatile precursor compd. of other Re(I) and Tc(I) complexes; substitution of the halide ligands by a variety of .sigma.-donor ligands is facile even under mild conditions. Examples include reactions with CN-tBu to yield quant. TcCl(CN-tBu)2(CO)3 and with a tetradentate phosphine ligand to yield dinuclear [Re2Br2(CO)6(tetraphos)]. The x-ray structures of both compds. were detd. Dissoln. of [NEt4]2[MX3(CO)3] in H2O under aerobic conditions results in the unusual organometallic aqua cation [M(OH2)3(CO)3]+; this species is stable in H2O for days (IR spectroscopy).
IT 163932-31-8, fac-Triaquatricarbonyltechnetium(1+)-99Tc
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (prepn. of)
RN 163932-31-8 HCAPLUS
CN Technetium(1+)-99Tc, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l61 1

L61 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:344354 HCAPLUS
DN 129:31312
TI Granulates based on agglomerated colored clay particles, and their manufacture and use
IN Manz, Joachim; Molders, Armand
PA Cerdec Aktiengesellschaft Keramische Farben, Germany
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

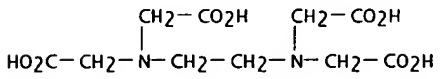
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 842911	A1	19980520	EP 1997-119583	19971108

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI DE 1996-19646944 19961113

AB The granulates are obtained by contacting spray granulated colorless clays with a soln. of .gtoreq.1 org. complexes of coloring metal ions. The granulates are used for manufg. unglazed clay tiles. Thus, 45.6 kg SG-FG (spray granulated colorless clay) was mixed with 3.6 kg Merapon 2005 (Co hydroxycarboxylate), and the resulting granules used for manufg. blue-stained clay tiles.

IT 60-00-4D, EDTA, metal complexes
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(coloring with; of spray-granulated colorless clays, for colored tile manuf.)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



=> d ind

L61 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2001 ACS
IC ICM C04B033-14
CC 57-5 (Ceramics)
ST colorless clay granule org complex; coloring metal org complex clay; cobalt hydroxycarboxylate complex clay; Merapon 2005 cobalt hydroxycarboxylate; blue clay tile cobalt hydroxycarboxylate
IT Granular materials
(clays, coloring of; with org. metal complexes, for colored tile manuf.)
IT Coordination compounds
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(coloring with; of spray-granulated colorless clays, for colored tile manuf.)
IT Clays, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(colorless, spray-granulated, coloring of; with org. metal complexes, for colored tile manuf.)
IT Amino acids, uses
Hydroxy carboxylic acids
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(metal complexes, coloring with; of spray-granulated colorless clays, for colored tile manuf.)
IT 207869-24-7, Merapon 2011
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Co hydroxycarboxylate V salt, coloring with; of spray-granulated colorless clays, for gray-colored tile manuf.)
IT 207869-26-9, Merapon 2015
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Co-Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for black-green-colored tile manuf.)
IT 207869-28-1, Merapon 2051
RL: NUU (Nonbiological use, unclassified); USES (Uses)

(Cr salt, coloring with; of spray-granulated colorless clays, for terra cotta-brown-colored tile manuf.)

IT 147335-52-2, Merapon 2009
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Cr-Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for chocolate-brown-colored tile manuf.)

IT 144113-76-8, Merapon 2020
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Fe hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for gray-colored tile manuf.)

IT 207869-21-4, Merapon 2004
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Fe-Co hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for black-colored tile manuf.)

IT 207869-23-6, Merapon 2006
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Fe-Mn-aminopolycarboxylate-hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for gray-brown-colored tile manuf.)

IT 207869-20-3, Merapon 1188 207869-25-8, Merapon 2014
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(Mn polycarboxylate, coloring with; of spray-granulated colorless clays, for colored tile manuf.)

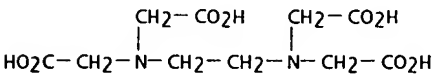
IT 207869-22-5, Merapon 2005
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(cobalt hydroxycarboxylate, coloring with; of spray-granulated colorless clays, for blue-colored tile manuf.)

IT 60-00-4D, EDTA, metal complexes 77-92-9D, metal complexes 87-69-4D, metal complexes 7440-05-3D, Palladium, chelates 7440-18-8D, Ruthenium, chelates
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(coloring with; of spray-granulated colorless clays, for colored tile manuf.)

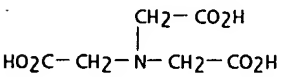
IT 207869-27-0, Merapon 2030
RL: NUU (Nonbiological use, unclassified); USES (Uses)
(vanadium chelate, coloring with; of spray-granulated colorless clays, for blue-colored tile manuf.)

=> d bib abs hitstr l61 2

L61 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:419232 HCAPLUS
DN 127:155934
TI Modification of 4-(2-pyridylazo)-resorcinol postcolumn reagent selectivity through competitive equilibria with chelating ligands
AU Co, Anne C.; Ko, Angela N.; Ye, Liwen; Lucy, Charles A.
CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
SO J. Chromatogr., A (1997), 770(1 + 2), 69-74
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier
DT Journal
LA English
AB Aminopolycarboxylate ligands were added to the 4-(2-pyridylazo)-resorcinol (PAR) postcolumn reagent to alter the reagent selectivity towards transition metals. Addn. of EDTA completely suppressed the reaction between PAR and the metal ions. Addn. of 0.1 mM nitrilotriacetic acid (NTA) to I mM PAR lowered the response to specific transition metal ions, but completely suppressed the PAR response to the lanthanides. Increasing the NTA concn. to 8 mM resulted in complete suppression of the PAR response to all metal ions except Cu2+ and Co2+, for which the detection limits were 3 and 1 ng, resp. The obsd. selectivity results from the slow rate of conversion of metal ions from the M(NTA)24- form to M(PAR)2.
IT 60-00-4, EDTA, uses 139-13-9, Nitrilotriacetic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 139-13-9 HCAPLUS
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



=> d ind 2

L61 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2001 ACS
CC 79-4 (Inorganic Analytical Chemistry)
ST modification pyridylazo resorcinol postcolumn reagent selectivity; competitive equil chelating ligand reagent selectivity; metal detn HPLC pyridylazo resorcinol reagent
IT Chelation
HPLC
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)
IT Rare earth ions
Transition metal ions
RL: ANT (Analyte); ANST (Analytical study)
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)
IT Ligands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)
IT 1141-59-9, 4-(2-Pyridylazo)-resorcinol

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(modification of 4-(2-pyridylazo)-resorcinol postcolumn reagent selectivity through competitive equil. with chelating ligands)

IT 7429-91-6, Dysprosium, analysis 7439-94-3, Lutetium, analysis 7439-96-5, Manganese, analysis 7440-02-0, Nickel, analysis 7440-19-9, Samarium, analysis 7440-44-0, Carbon, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-52-0, Erbium, analysis 7440-54-2, Gadolinium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)

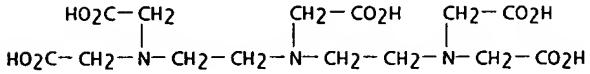
IT 60-00-4, EDTA, uses 139-13-9, Nitrilotriacetic acid
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(transition metal and lanthanides detn. by HPLC using pyridylazo resorcinol postcolumn reagent and modification of reagent selectivity with addn. of EDTA and NTA)

=> d bib abs hitstr l61 3

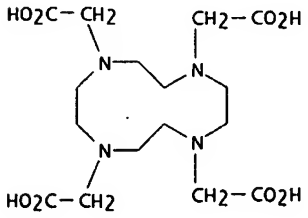
L61 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:517749 HCAPLUS
DN 119:117749
TI Preparation of bifunctional ligands for metals as imaging agent for diagnosis
IN Hashifuchi, Yuji; Iwai, Kumiko; Seri, Shigemi; Kondo, Susumu; Azuma, Makoto
PA Nihon Medi-Physics Co., Ltd., Japan
SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 535668	A1	19930407	EP 1992-116804	19921001
	EP 535668	B1	19960807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 05097712	A2	19930420	JP 1991-258017	19911004
	JP 2894879	B2	19990524		
	US 5271924	A	19931221	US 1992-952992	19920929
	CA 2079493	AA	19930405	CA 1992-2079493	19920930
	AT 141058	E	19960815	AT 1992-116804	19921001
	ES 2093163	T3	19961216	ES 1992-116804	19921001
	AU 9226191	A1	19930408	AU 1992-26191	19921002
	AU 650791	B2	19940630		
	US 5352431	A	19941004	US 1993-119387	19930913
PRAI	JP 1991-258017	19911004			
	US 1992-952992	19920929			

OS MARPAT 119:117749
AB The bifunctional ligand comprises galactosamino-oligosaccharide and polyaminopolycarboxylic acid. To galactosamino-pentamer in phosphate buffer was added 1-(p-isothiocyanatebenzyl)diethylenetriaminepentaacetic acid, to give after workup their reaction product which in distd. H2O was added to 0.1M citrate buffer followed by InCl3 (148MBeq) to give the complex (I) having a radiochem. purity of 100%. The 1/2 life of I in blood was 55 min, clin. effective retention in blood and good excretion in urine.
IT 67-43-6DP, Diethylenetriamine pentaacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes 60239-18-1DP , 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as imaging agent for diagnosis)
RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 60239-18-1 HCAPLUS
CN 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid (9CI) (CA INDEX NAME)

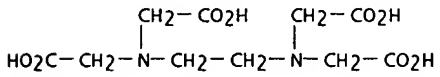


=> d ind 3

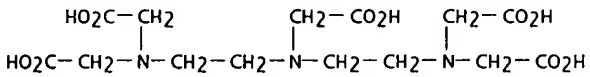
L61 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2001 ACS
IC ICM A61K049-00
ICS A61K049-04
CC 33-7 (Carbohydrates)
Section cross-reference(s): 8
ST metal bifunctional ligand; galactosamino oligosaccharide polyaminopolycarboxylate metal; imaging metal bifunctional ligand diagnosis
IT Imaging
(NMR, agents, galactosamino oligosaccharides and polyaminopolycarboxylic acid metal complexes, for diagnosis)
IT Diagnosis
(agents, imaging, galactosamino oligosaccharides-polyaminopolycarboxylic acid metal complexes)
IT Radiography
(contrast agents, galactosamino oligosaccharides and polyaminopolycarboxylic acid metal complexes, for diagnosis)
IT 7429-91-6, Dysprosium, biological studies 7439-88-5, Iridium, biological studies 7439-89-6, Iron, biological studies 7440-15-5, Rhenium, biological studies 7440-19-9, Samarium, biological studies 7440-24-6, Strontium, biological studies 7440-26-8, Technetium, biological studies 7440-27-9, Terbium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-52-0, Erbium, biological studies 7440-55-3, Gallium, biological studies 7440-56-4, Germanium, biological studies 7440-60-0, Holmium, biological studies 7440-64-4, Ytterbium, biological studies 7440-65-5, Yttrium, biological studies
RL: BIOL (Biological study)
(imaging agent contg., for NMR diagnosis)
IT 67-43-6DP, Diethylenetriamine pentaacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes 7440-54-2DP, Gadolinium, reaction products with galactosamino-oligosaccharides and polyaminopolycarboxylic acid 7440-69-9DP, Bismuth, reaction products with galactosamino-oligosaccharides and polyaminopolycarboxylic acid 7440-74-6DP, Indium, reaction products with galactosamino-oligosaccharides and polyaminopolycarboxylic acid 41708-95-6DP, reaction products with polyaminopolycarboxylic acid, metal complexes 60239-18-1DP, 1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes 121806-83-5DP, 1-(p-Isothiocyanate benzyl)diethylenetriamine pentaacetic acid, reaction products with galactosamino-oligosaccharides, metal complexes 128174-30-1DP, reaction products with polyaminopolycarboxylic acid, metal complexes 128174-32-3DP, reaction products with polyaminopolycarboxylic acid, metal complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as imaging agent for diagnosis)

=> d bib abs hitstr l61 4

L61 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1990:643568 HCAPLUS
DN 113:243568
TI Preparation and spectroscopic properties of europium(III) polynuclear complexonates with divalent metals
AU Karasev, V. E.; Loginov, A. A.
CS Inst. Khim., Vladivostok, USSR
SO Koord. Khim. (1990), 16(8), 1136-40
CODEN: KOKHDC; ISSN: 0132-344X
DT Journal
LA Russian
AB Eu2[ML]3.nH2O (M = Mg, Ca, Ba, Sr, Cu, Mn, Zn, Cd, Co; H4L = EDTA) and EuM1L1.nH2O (M1 = Ca, Cu; H5L1 = diethylenetriaminepentaacetic acid) were prepd. from Eu2O3, MCO3 and H4L or H5L1. These complexes were characterized by x-ray phase anal., TGA, IR and luminescence spectroscopy. The coordination of the complexons to 2 different metals affects the specifics of the migration of photoexcitation energy between the metals. The Cu and Co ions effectively quench the luminescence which is caused by the arrangement of the energy levels of the ions.
IT 60-00-4DP, EDTA, europium complexes with transition metals or alk. earth metals 67-43-6DP, Diethylenetriamine pentaacetic acid, cobalt-europium or copper-europium complexes
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and luminescence of)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

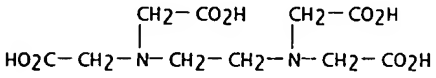


RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



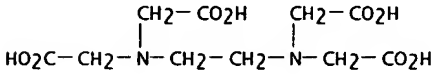
=> d bib abs hitstr l61 5

L61 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1990:433966 HCAPLUS
DN 113:33966
TI Kinetic and spectrophotometric determination of trace zinc(II) in the presence of a large amount of lead(II) using ligand-substitution reactions of their metalloporphyrins with EDTA
AU Tabata, Masaaki; Kajihara, Naoko
CS Fac. Sci. Eng., Saga Univ., Saga, 840, Japan
SO Anal. Sci. (1989), 5(6), 719-24
CODEN: ANSCEN; ISSN: 0910-6340
DT Journal
LA English
AB The formation const. of the lead(II) complex of 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine (H2TPPS4) (log K) defined as Pb2+ + H2TPPS4 .dblharw. Pb(II)(TPPS4) + 2H+ is -9.97 .+-. 0.02, which is 109 times smaller than that of Zn(II)(TPPS4). In addn., Pb(II)(TPPS4) was rapidly replaced with EDTA with a half-life 200 ms. Zn(II)(TPPS4) is stable and does not react with EDTA even after 2 h. The large difference in the equil. and kinetic behavior between Zn(II)- and Pb(II)(TPPS4) allows the detn. of zinc(II) at as low as 10-7 mol dm-3 in the presence of 10-2 mol dm-3 lead(II). The molar absorptivity of Zn(II)(TPPS4) is 4.66 .times. 105 mol-1 dm3 cm-1. The method was applied to the detn. of zinc(II) in lead chems. (lead(II) nitrate, lead(II) acetate and lead metal) and in tap and waste waters by measurement of the absorbance at 421 nm. The optimum conditions of the ligand-buffer soln. contg. aminopolycarboxylates and lead(II) are described to remove the interference of copper(II), cobalt(II) and manganese(II).
IT 60-00-4, EDTA, analysis
RL: PRP (Properties)
(kinetics of substitution reaction of, with lead and zinc sulfonatoporphine complexes)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

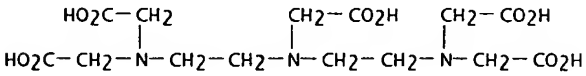


=> d bib abs hitstr l61 6

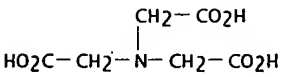
L61 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1983:221787 HCAPLUS
DN 98:221787
TI Comparison of complexes with 99mTc and 99Tc using paper chromatography
AU Blaeuenstein, P.; Girgenrath, K.; Gasche, W.
CS Swiss Fed. Inst. React. Res., Wuerenlingen, CH-5303, Switz.
SO Anal. Chem. Symp. Ser. (1983), 13(Chromatogr. Biochem., Med. Environ. Res. 1), 199-201
CODEN: ACSSDR; ISSN: 0167-6350
DT Journal
LA English
AB The rate of complex formation of 99Tc and 99mTc was studied by paper chromatog. using MeCN-H2O (2.5:1) as elution agent. Both isomers form the same products, but 99mTc produces a significant acceleration of the reaction. Changes in the reducing agent influences the redn. rate but not the product formed. The redn. rate increased in the order HSO3- < Sn < SnCl2. Investigation of com. DTPA-, EDTA-, and NTA-kits indicates slow complex formation but rapid redn. of 99mTcO4-. Although x-ray anal. of Tc-NTA complex was not completed, elemental anal. indicate the formula K2[Tc2O2(NTA)2].
IT 60-00-4D, technetium 99 and 99m complexes
67-43-6D, technetium 99 and 99m complexes
139-13-9D, technetium 99 and 99m complexes
RL: FORM (Formation, nonpreparative)
(formation of, rate of, paper chromatog. in study of)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 139-13-9 HCAPLUS
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)

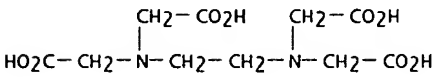


=> d bib abs hitstr l61 7

L61 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1982:412562 HCAPLUS
DN 97:12562
TI Fibrous activated carbon loaded with metal-aminopolycarboxylic acid chelate as an ozone decomposition catalyst
PA Toho Beslon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

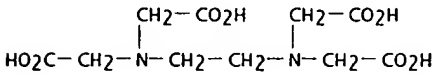
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57059635	A2	19820410	JP 1980-135253	19800930

AB Fibrous activated C of sp. surface area 300-2000 m2/g, C6H6 adsorption rate const. .gtoreq.0.2/min, strength .gtoreq.15 kg/mm2, and diam. 3-25 .mu. is loaded with 0.01-20% metal aminopolycarboxylate, the metal being Cu, Ag, Zn, Cd, Cr, Mn, Co, Ni, Pd, or Fe. Thus, 90:10 acrylonitrile-Me acrylate fiber was made flame-resistant in air at 230-50.degree. for 6 h with strain to give 20% shrinkage and activated at 900.degree. for 10 h in steam. The activated C(1200 m2/g. 0.6/min, 25 kg/mm2, and 5 .mu., resp.) was soaked in 100 vols. of 0.8% aq. Cu-EDTA for 30 min, dried at 100.degree. for 1 h to be loaded with 2% Cu-EDTA, and a 0.05 g portion was filled in a 35 mm glass tube in 0.03 g/mL filling d. When air contg. 2 ppm O3 was passed over at 0.023 m3/min, O3 decompn. was 100 % after 50.
IT 60-00-4D, copper complexes
RL: CAT (Catalyst use); USES (Uses)
(catalysts, on active carbon fibers for ozone decompn.)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

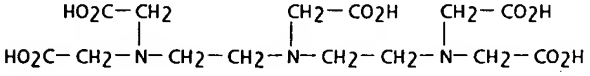


=> d bib abs hitstr l61 8

L61 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2001 ACS
AN 1982:82004 HCAPLUS
DN 96:82004
TI Technetium-99m complexes of EDTA analogs: studies of the radiochemistry and biodistribution
AU Baker, Richmond J.; Diamanti, Carol I.; Goodwin, David A.; Meares, Claude F.
CS VA Hosp., Palo Alto, CA, USA
SO Int. J. Nucl. Med. Biol. (1981), 8(2-3), 159-69
CODEN: IJNMCI; ISSN: 0047-0740
DT Journal
LA English
AB The prepn. of 99mTc aminopolycarboxylate complexes was carried out under anaerobic conditions using Sn ions as the reducing agent. Electrophoresis and TLC were used for anal., showing that DTPA, EDTA, and 1-methyl-EDTA prepns. contained most of the 99mTc radioactivity in the chelate form. Kinetics studies showed that binding to 1-phenyl-EDTA was slow. All compds. migrated towards the anode on electrophoresis, enabling sepn. from free TcO4- and reduced 99mTc. Quant. distribution studies in mice and computerized renograms in rabbits showed that renal clearance was the main excretory route, but all compds. were cleared more slowly than [131I]hippuran. The presence of the lipophilic Ph group in the EDTA mol. produced excretion partially by the binary route. These complexes belong to a series of bifunctional chelates which has the potential to produce new 99mTc-radiopharmaceuticals having the in vivo stability of 99mTc-EDTA.
IT 60-00-4DP, technetium-99m complexes 67-43-6DP, technetium-99m complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and radiochem. and metab. of, scintigraphy in relation to)
RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



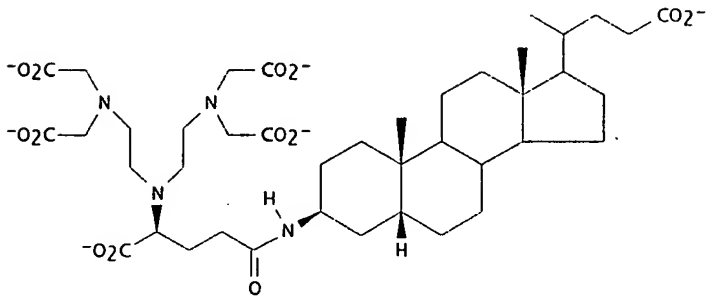
=> d bib abs hitstr l74 1

L74 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:456934 HCAPLUS
DN 133:98665
TI Preparation of metal complexes of polyaminopolycarboxylate linked bile acid derivatives as blood pool agents for nuclear magnetic resonance diagnostics
IN Anelli, Pier Lucio; Brocchetta, Marino; De Haen, Christoph; Gazzotti, Ornella; Lattuada, Luciano; Lux, Giovanna; Manfredi, Giuseppe; Morosini, Pierfrancesco; Palano, Daniela; Serleti, Michele; Uggeri, Fulvio; Visigalli, Massimo
PA Bracco International B.V., Neth.; et al.
SO PCT Int. Appl., 123 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000038738	A1	20000706	WO 1999-EP10002	19991216

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI IT 1998-MI2802 19981223
OS MARPAT 133:98665
GI



I

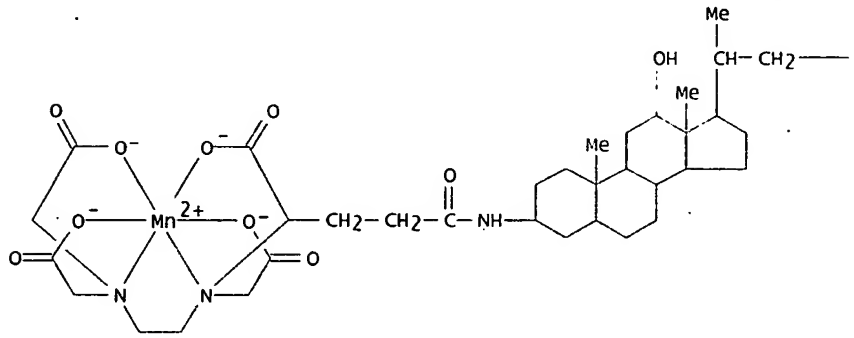
AB The prepn., use and diagnostic compns. are described for complexes of X-L-Y (I) with paramagnetic bi-trivalent metal ions selected from the group consisting of Fe(2+), Fe(3+), Cu(2+), Cr(3+), Gd(3+), Eu(3+), Dy(3+), Yb(3+) or Mn(2+), as well as the salts thereof with physiol. compatible org. bases selected from primary, secondary, tertiary amines or basic amino acids, or with inorg. bases whose cations are sodium, potassium, magnesium, calcium or mixts. thereof. In X-L-Y, X is the residue of a polyaminopolycarboxylic ligand and the derivs. thereof, selected from the group consisting of: EDTA, DTPA, DOTA, DO3A, BOPTA; Y is the deriv. of a bile acid selected from the group consisting of residues of cholic, chenodeoxycholic, deoxycholic, ursodeoxycholic, lithocholic acids, both as they are and functionalized at the positions having the hydroxy group as the reactive group; L is a chain linked at any position of X and the C-3, C-7, C-12 positions of Y. The complexes may be used for the imaging of the blood system of the human and animal body, by NMR. Thus, [GdL](Q)3 (L = II, Q = methylglucammonium) was prepd. and its applicability for use as an MRI imaging agent demonstrated by measuring the relaxation rate of rabbit blood.
IT 280765-69-7P 280765-70-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of metal complexes of polyaminopolycarboxylate linked

bile acid derivs. as blood pool agents for NMR diagnostics)

RN 280765-69-7 HCAPLUS

CN Manganate(3-), [(3.beta.,5.beta.,12.alpha.)-3-[[(4S)-4-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]-4-(carboxy-.kappa.O)-1-oxobutyl]amino]-12-hydroxycholan-24-oato(5-)]-, trisodium (9CI) (CA INDEX NAME)

PAGE 1-A



● 3 Na^+

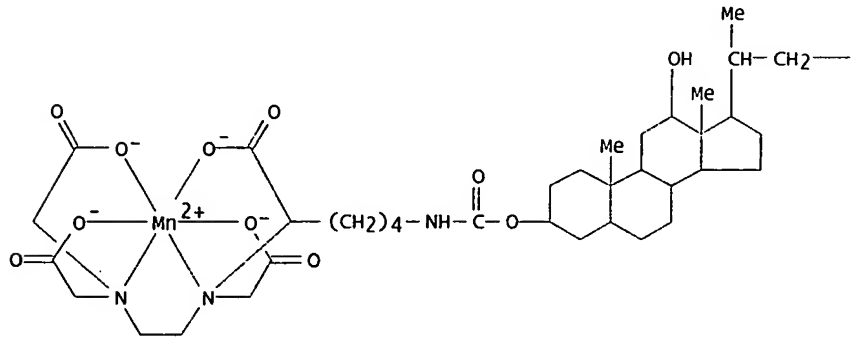
PAGE 1-B

$-CH_2-CO_2^-$

RN 280765-70-0 HCAPLUS

CN Manganate(3-), [(3.alpha.,5.beta.,12.alpha.)-3-[[[[(5S)-5-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]-5-(carboxy-.kappa.O)pentyl]amino]carbonyl]oxy]-12-hydroxycholan-24-oato(5-)]-, trisodium (9CI) (CA INDEX NAME)

PAGE 1-A



● 3 Na^+

$-CH_2-CO_2^-$

RE.CNT 5
RE
(1) Abbott Lab; EP 0279307 A 1988 HCAPLUS
(2) Betebenner, D; Bioconjugate Chem 1991, V2(2), P117 HCAPLUS
(3) Hoechst AG; EP 0417725 A 1991 HCAPLUS
(4) Lucio, A; WO 9532741 A 1995 HCAPLUS
(5) Peter, M; WO 9519186 A 1995 HCAPLUS

=> d bib abs hitstr l74 2

L74 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:210175 HCAPLUS
DN 132:245443
TI Method for preparing metalloporphyrin-metal complex conjugates
IN Platzek, Johannes; Niedballa, Ulrich
PA Schering Aktiengesellschaft, Germany
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000017205	A2	20000330	WO 1999-EP6075	19990820
	WO 2000017205	A3	20000713		
	W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19845782	C1	20000413	DE 1998-19845782	19980922
	AU 9956230	A1	20000410	AU 1999-56230	19990820
	US 6194566	B1	20010227	US 1999-400993	19990921
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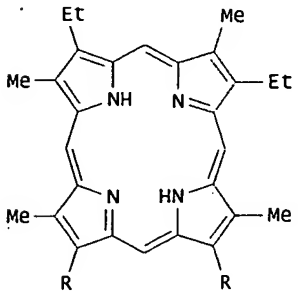
	US 1997-67366		19971202		
	WO 1999-EP6075		19990820		

OS MARPAT 132:245443
GI



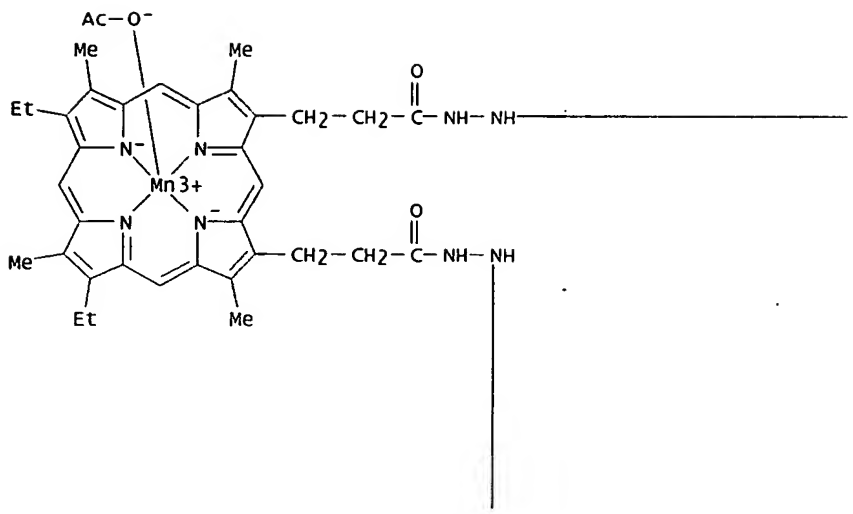
I

AB The invention relates to a method for prepg. metalloporphyrin-metal complex conjugates, contg. at least one ion of an element with an at. no. 20-32, 37-39, 42-51 or 57-83 in the complex fraction of the conjugate. For example, Na2[CuGd2L] [H10L = I; R = CH2CH2CONHNHCOCH2N(CH2CH2N(CH2CO2H)2)CH2CH2N(CH2CO2H)2] was prepd. in 97 % yield by the reaction of Na2Gd2(H2L) in HOAc with Cu(acac)2 under N with heating at 120.degree. for 6 h.

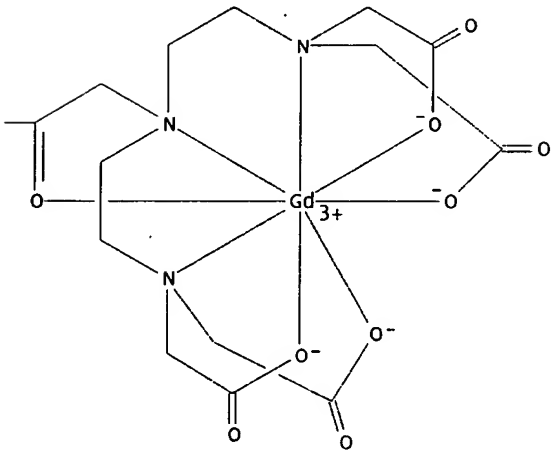
IT 256635-56-0P 256635-57-1P 261721-54-4P
261721-85-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 256635-56-0 HCAPLUS
CN Gadolinate(2-), [(acetato-.kappa.O)manganate][.mu.3-[[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoic acid-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24) bis[2-[[bis[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl]amino-.kappa.N]acetyl-.kappa.O]hydrazidato]](10-)]]di-, disodium (9CI) (CA INDEX NAME)

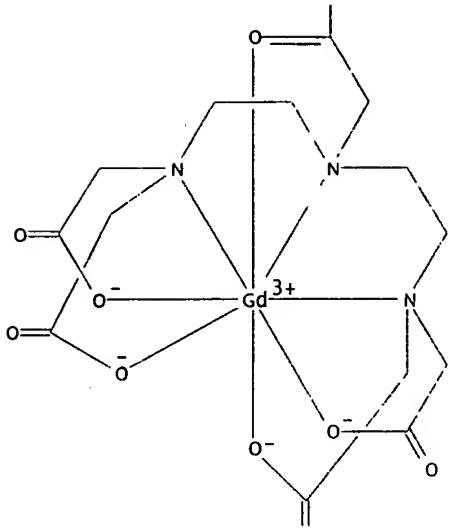
PAGE 1-A



PAGE 1-B



PAGE 2-A

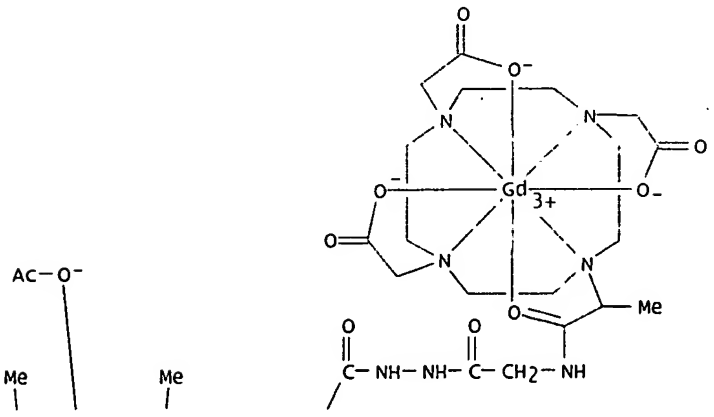


PAGE 3-A

● 2 Na^+

RN 256635-57-1 HCAPLUS
CN Gadolinium, [(acetato-.kappa.O)manganese][.mu.3-[[10,10'-[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl)bis[(1-oxo-3,1-propanediyl)hydrazo(2-oxo-2,1-ethanediyl)imino[1-methyl-2-(oxo-.kappa.O)-2,1-ethanediyl]]]bis[1,4,7,10-tetraazacyclododecane-1,4,7-triacetato-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O4,.kappa.O7]](8-)]]di- (9CI) (CA INDEX NAME)

PAGE 1-A



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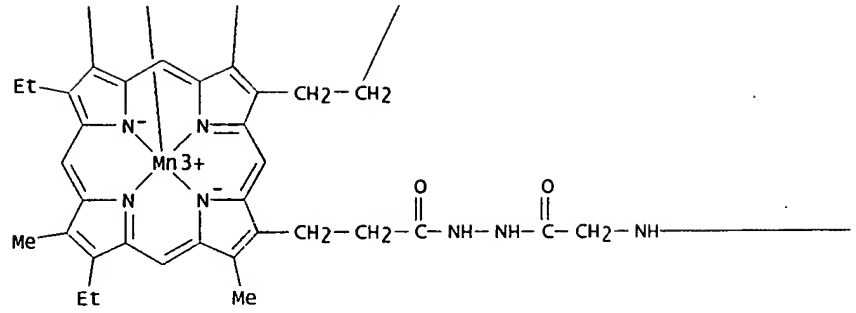

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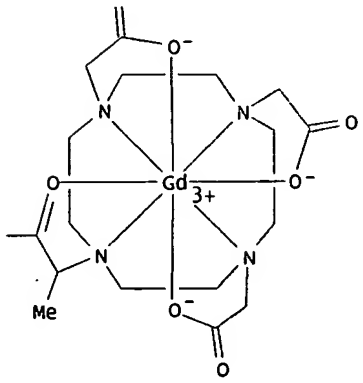
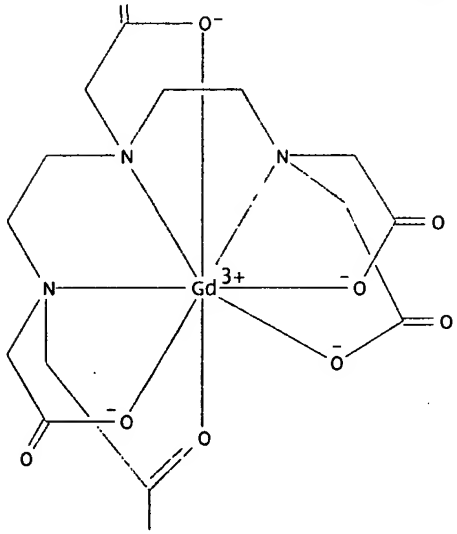


RN 261721-54-4 HCAPLUS
CN Gadolinate(2-), [(acetato-.kappa.O)manganate][.mu.3-[[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoic

acid-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24) bis[2-[[[2-[[2-[bis[(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]ethyl][(carboxy-.kappa.O)methyl]amino-.kappa.N]acetyl-.kappa.O]hydrazidato]](10-)]]di-, disodium (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A



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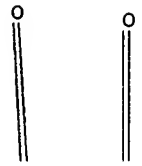

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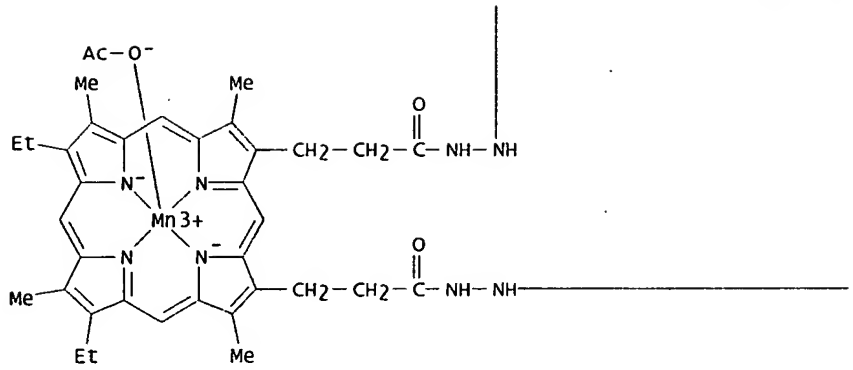

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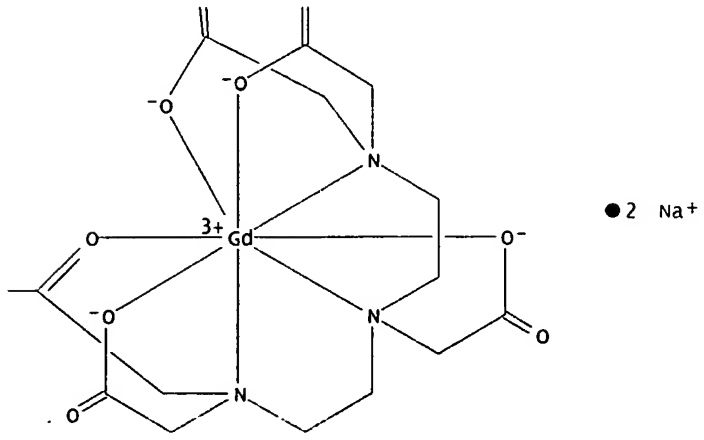
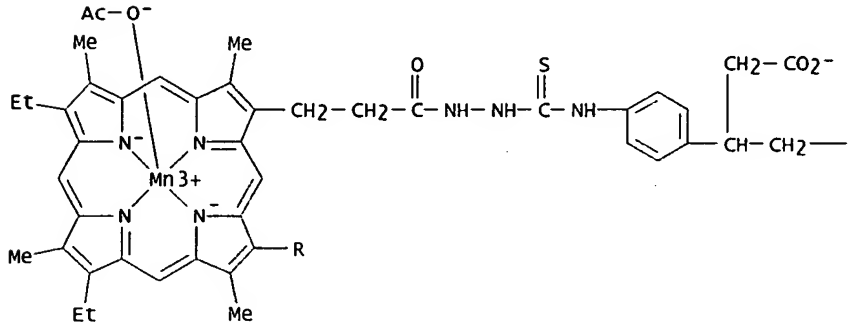


RN 261721-85-1 HCAPLUS

CN Gadolinate(4-), [(acetato-.kappa.O)manganate][.mu.3-[[10,10'-[(7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-diyl-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24)bis[(1-oxo-3,1-propanediyl)hydrazo(thioxomethylene)imino-4,1-phenylene[3-(carboxymethyl)-1-oxo-3,1-propanediyl]]imino[2-(hydroxy-.kappa.O)-3,1-propanediyl]]]bis[1,4,7,10-tetraazacyclododecane-1,4,7-triacetato-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O4,.kappa.O7]](12-)]]di-, disodium dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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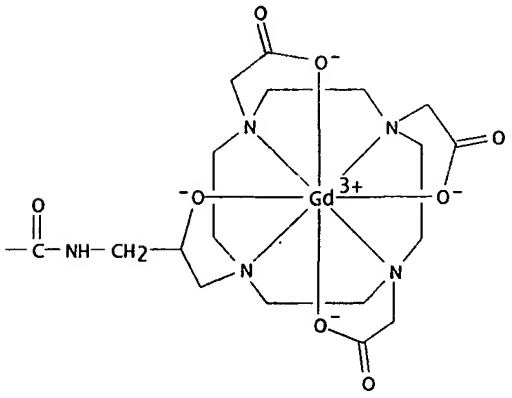

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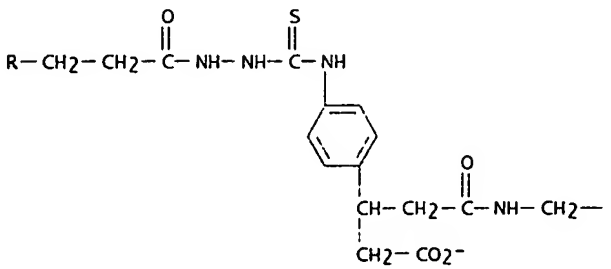

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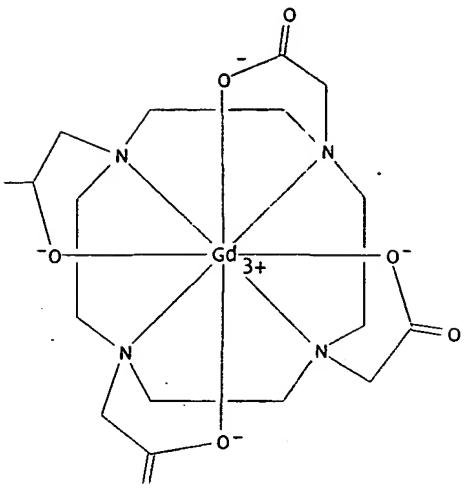

PAGE 3-A

● 2 H^+

● 2 Na^+

PAGE 3-B

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=> d bib abs hitstr 174 3

L74  ANSWER 3 OF 19  HCAPLUS  COPYRIGHT 2001 ACS
AN   1997:579696  HCAPLUS
DN   127:228839
TI   Pharmaceutical agents containing perfluoroalkyl-containing metal complexes
     and the use thereof in tumor therapy and intervention al radiology
IN   Platzek, Johannes; Niedballa, Ulrich; Raduchel, Bernd; Schlecker,
     Wolfgang; Weinmann, Hanns-Joachim; Frenzel, Thomas
PA   Schering A.-G., Germany
SO   PCT Int. Appl., 144 pp.
     CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
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PI   WO 9730969         A1    19970828       WO 1997-EP684    19970214
         W:  AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IL, IS,
             JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW,
             MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG,
             UZ, VN
         RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     DE 19608278         A1    19970828       DE 1996-19608278 19960223
     CA 2247253          AA    19970828       CA 1997-2247253  19970214
     AU 9717692          A1    19970910       AU 1997-17692    19970214
     EP 882010           A1    19981209       EP 1997-903278   19970214
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2000504736       T2    20000418       JP 1997-529766   19970214
     US 6180113          B1    20010130       US 1997-801983   19970219
     NO 9803875          A     19981022       NO 1998-3875     19980821
PRAI DE 1996-19608278    19960223
     US 1996-12506       19960229
     WO 1997-EP684       19970214
OS   MARPAT 127:228839
AB   The invention relates to pharmaceutical agents contg. perfluoro alkylated
     metal complexes RF-L-A and the use thereof in tumor therapy and
     interventional radiol., in which formula RF is a perfluorinated,
     straight-chain or branched C chain with the formula -CnF2nX (X = terminal
     F, Cl, Br, I or H atom and n = 4-30), L is a binding group, and A is a
     metal complex or the salts thereof of org. and/or inorg. bases or amino
     acids or amino acid amides.  Thus Gd/Dy/Y/Mn complexes of
     tetraazacyclododecane having amide pendants with perfluoroalkyl groups or
     polyaminopolycarboxylic acids with pendants contg. perfluoroalkyl groups
     were prepd.
IT   195046-83-4P
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (prepn. and use as pharmaceutical agent in tumor therapy and
        interventional radiol.)
RN   195046-83-4  HCAPLUS
CN   Manganate(1-), [10-[3-[[[[2-[(heptadecafluorooctyl)sulfonyl]ethyl]amino]ac
     etyl]amino]-2-hydroxypropyl]-1,4,7,10-tetraazacyclododecane-1,4,7-
     triacetato(3-)-.kappa.N1,.kappa.N4,.kappa.N7,.kappa.N10,.kappa.O1,.kappa.O
     4,.kappa.O7]-, sodium (9CI)  (CA INDEX NAME)
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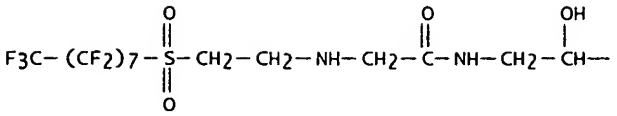
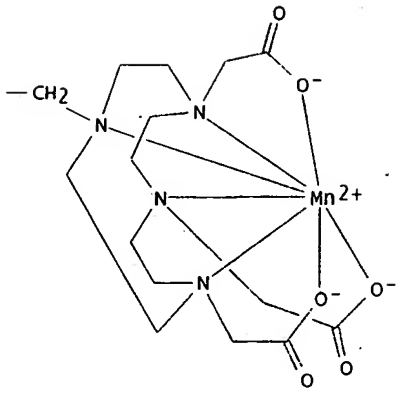
PAGE 1-A



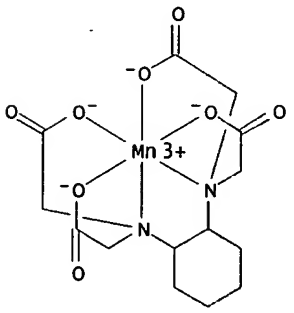
● Na^+

PAGE 1-B



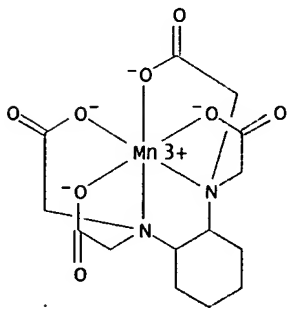
=> d bib abs hitstr l74 4

L74 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:39202 HCAPLUS
DN 126:90883
TI In situ electrochemically mediated oxygen delignification of wood pulp with a manganese(III) aminopolycarboxylate complex
AU Gyenge, Elod L.; Oloman, Colin W.
CS Dep. Chem. Eng., Univ. British Columbia, Vancouver, BC, V6T 1Z4, Can.
SO Tappi J. (1997), 80(1), 194-202
CODEN: TAJODT; ISSN: 0734-1415
PB TAPPI Press
DT Journal
LA English
AB The Mn complex Mn(III)CyDTA [(trans-1,2-cyclohexane-1,2-diamine-N,N,N',N'-tetraaceto)manganate (III)] (I) was used as the redox catalyst for the in situ electrochem. mediated O bleaching of softwood kraft pulp. Three hour bleaching runs at 101 kPa O pressure, pH 9.0, 80.degree., 1.4 mM Mn, with 1 L of pulp suspension at 1% consistency gave the following results: in the presence of an initial concn. of 1.4 mM I employing a graphite plate anode (area = 58 cm2) with a c.d. of 102 A/m2, the kappa no. dropped from 30.0 to 15.0, while the viscosity decreased from 34.6 cP to 20.5 cP. Under similar conditions, the "blank" run, i.e., without I and current, brought about only a 9.4% decrease in kappa no., from 30.0 to 27.2, while the viscosity dropped slightly, from 34.6 cP to 30.3 cP. The effects of Mn concn., CyDTA/Mn molar ratio, O, temp., pH, and current on delignification and carbohydrate degrdn., were studied in parametric and factorial expts. The results showed that Mn(III) promotes delignification mainly through 2nd- and 3rd-order interaction with O and a temp., whereas CyDTA is working as a carbohydrate protecting agent. The anodic current continuously regenerates the Mn(III) to support the delignification process.
IT 73360-48-2
RL: CAT (Catalyst use); USES (Uses)
(in situ electrochem. mediated oxygen bleaching of pulp with manganese(III) aminopolycarboxylate complex catalysts)
RN 73360-48-2 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)

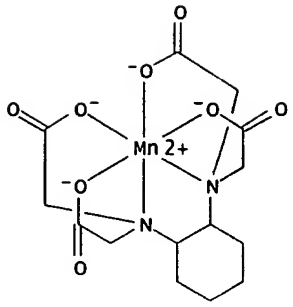


=> d bib abs hitstr l74 5

L74 ANSWER 5 OF 19 . HCAPLUS COPYRIGHT 2001 ACS
AN 1996:427571 HCAPLUS
DN 125:179781
TI Electrosynthesis of a manganese(III) aminopolycarboxylate complex in alkaline media
AU Gyenge, E. L.; Oloman, C. W.
CS Dep. Chem. Eng., Univ. British Columbia, Vancouver, V6T 1Z4, Can.
SO J. Appl. Electrochem. (1996), 26(7), 721-732
CODEN: JAELBJ; ISSN: 0021-891X
DT Journal
LA English
AB Mn(III)CyDTA [(trans-cyclohexane-1,2-diamine-N,N,N',N'-tetraacetato)manganate(III)] was generated electrochem. from Mn (II)CyDTA (6-54 mM) in 0.1M NaHCO3 at pH 9.0 and 10.5, resp., 25.degree., for two CyDTA/Mn molar ratios (1/1 and 2/1). A divided batch electrochem. reactor was employed with anode current densities from 2.6 to 102 A m-2. Sep. cyclic voltammetry expts. of Mn(III)CyDTA in alk. media showed a prepeak behavior, indicating the adsorption of Mn(II) species. The visible anodic deposit, formed during the electrosynthesis of Mn(III)CyDTA at pH 10.5 and 1/1 CyDTA/Mn molar ratio on stainless steel and PbO2/Pb, reduces the current efficiency for Mn(III). For a Mn(II) concn. of 18 mM and at 13 A m-2, the graphite and platinized titanium anodes gave a current efficiency for Mn(III) of 78% and 66%, resp., without a visible deposit. A 2/1 CyDTA/Mn molar ratio, avoided a visible anodic deposit formation, but gave lower current efficiencies for Mn(III) than in the case of a 1/1 ligand to metal ratio. The electrosynthesis of Mn(III)CyDTA is recommended for routine prepn. of the complex and is also suitable for in situ electrochem. mediated oxidns. in alk. media (up to pH 11).
IT 73360-48-2P, (trans-Cyclohexane-1,2-diamine-N,N,N',N'-tetraacetato)manganate(1-)
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(electrochem. oxidative prepn. in alk. soln.)
RN 73360-48-2 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



IT 14650-07-8
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process)
(electrochem. oxidn. and adsorption by electrodes)
RN 14650-07-8 HCAPLUS
CN Manganate(2-), [[rel-N,N'-(1R,2R)-1,2-cyclohexanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)


O
-O
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O-
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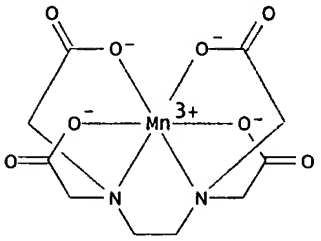
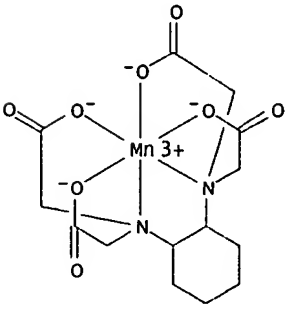
Mn 2+
-O
N
N
O

=> d bib abs hitstr l74 6

L74 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:286499 HCAPLUS
DN 122:94975
TI Oxidation reactions of Mononuclear Manganese(III) Complexes
AU Gangopadhyay, Sumana; Ali, Mahammad; Banerjee, Pradyot
CS Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Calcutta, 700 032, India
SO Coord. Chem. Rev. (1994), 135(1-2), 399-427
CODEN: CCHRAM; ISSN: 0010-8545
DT Journal; General Review
LA English
AB A review, with 73 refs., is given on the oxidn. reactions of various Mn(III) coordinated mols. The reactions are categorized primarily with respect to the type of Mn(III) complexes. Emphasis is given to the reactivity of the Mn(III) complexes derived from aminopolycarboxylic acids, acetylacetone, porphyrins, bipyridine, and pyrophosphoric acid with various org., inorg., and biochem. electron donors. Kinetic and mechanistic features assocd. with the interactions are highlighted and analyzed critically. The utility and scope of the catalytic oxidn. of hydrocarbons and secondary amines by Mn(III) porphyrins are discussed at length.
IT 11133-34-9, (Ethylenediaminetetraacetato)manganate(1-)
73360-48-2, (trans-1,2-Cyclohexanediamine-N,N,N',N'-tetraacetato)manganate(1-)
RL: RCT (Reactant)
(oxidn. reactions of)
RN 11133-34-9 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



RN 73360-48-2 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



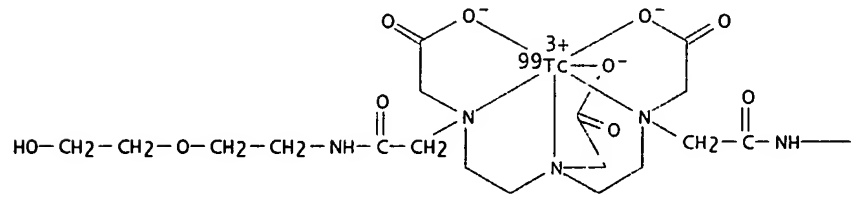
=> d bib abs hitstr l74 7

L74 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:58757 HCAPLUS
DN 116:58757
TI Preparation of biological aminopolycarboxylic acid chelating agents
IN Rongved, Paal; Klaveness, Jo; Dugstad, Harald
PA Cockbain, Julian Roderick Michaelson, UK; Nycomed A/S
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9115467	A1	19911017	WO 1991-EP675	19910409
	W: AU, CA, FI, JP, NO, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	AU 9176642	A1	19911030	AU 1991-76642	19910409
PRAI	GB 1990-7967		19900409		
	WO 1991-EP675		19910409		

OS MARPAT 116:58757
AB Title compds. (XCHR1)2N(CHR1)nA(CHR1)mN(CHR1X)2 [A = XR1CHN:, (XR1CH)2N(R1CH)pN:, (R1CH)mA represents a C-N bond; X = HO2C or deriv. thereof, R1 = H, (substituted) alkoxy, (substituted) alkyl, R3R2NCO; R2 = H, (substituted) alkyl; R3 = (substituted) alkoxyalkyl, etc.; m, n, p = 2-4; with provisos], metal chelates and salts thereof, as therapeutic, diagnostic, and detoxification agent (no data) are prepd. 2-(Aminoethoxy)ethanol in AcNME3, was added to 1,5-bis(2,6-dioxomorpholino)-3-azapentane-3-acetic acid, the soln. stirred overnight and a soln. of ether/chloroform (1:1 ratio) added to give 6-(carboxymethyl)-3,9-bis(5-hydroxy-3-oxapentylcarbamoylmethyl)-3,6,9-triazaundecane diacid (I). I dissolved in H2O was added to Gd(III) oxide, and the mixt. refluxed overnight to give Gd I chelate. Formulations comprising the title chelates are given.
IT 138368-42-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for diagnostic imaging, metal detoxication and radiotherapy)
RN 138368-42-0 HCAPLUS
CN Technetium-99Tc, [9,12-bis(carboxymethyl)-1-hydroxy-15-[2-[[2-(2-hydroxyethoxy)ethyl]amino]-2-oxoethyl]-7-oxo-3-oxa-6,9,12,15-tetraazaheptadecan-17-oato(3-)-N9,N12,N15,O9,O12,O17]- (9CI) (CA INDEX NAME)

PAGE 1-A

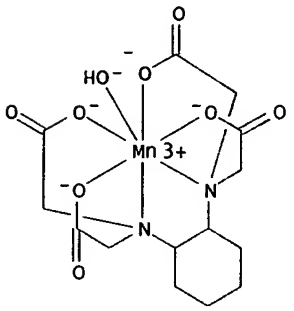


PAGE 1-B

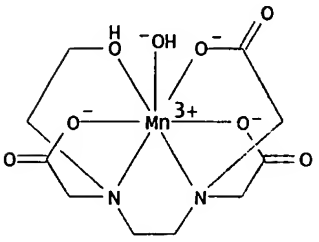
—CH2—CH2—O—CH2—CH2—OH

=> d bib abs hitstr l74 8

L74 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:458098 HCAPLUS
DN 115:58098
TI Kinetics and mechanism of reaction between aminopolycarboxylatomangan ate(III) complexes and cyanide ions: a reinvestigation of the MnCyDTA-CN- reaction [Erratum to document cited in CA114(16):50399e]
AU Mishra, Pratima K.; Prasad, Surendra; Nigam, Prem C.
CS Dep. Chem., Reg. Res. Lab., Bhubaneswar, 751005, India
SO Transition Met. Chem. (London) (1991), 16(2), 288
CODEN: TMCHDN; ISSN: 0340-4285
DT Journal
LA English
AB Changes in author addresses have been made. The errors were not reflected in the abstr. or the index entries.
IT 131611-96-6 131629-60-2
RL: RCT (Reactant)
(substitution reaction of, with cyanide, kinetics and mechanism of (Erratum))
RN 131611-96-6 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']hydroxy- (9CI) (CA INDEX NAME)

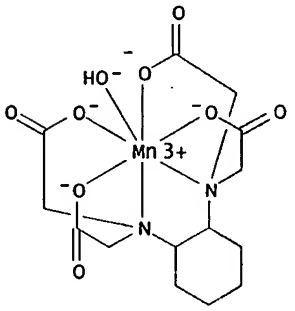


RN 131629-60-2 HCAPLUS
CN Manganate(1-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)glycinato(3-)]hydroxy- (9CI) (CA INDEX NAME)

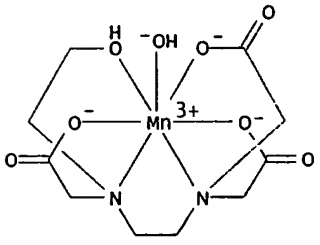


=> d bib abs hitstr l74 9

L74 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:50399 HCAPLUS
DN 114:50399
TI Kinetics and mechanism of reaction between aminopolycarboxylatomangan ate(III) complexes and cyanide ions: a reinvestigation of the MnCyDTA-CN- reaction
AU Mishra, Pratima K.; Prasad, Surendra; Nigam, Prem C.
CS Dep. Chem., Reg. Res. Lab., Bhubaneswar, 751005, India
SO Transition Met. Chem. (London) (1990), 15(6), 429-33
CODEN: TMCHDN; ISSN: 0340-4285
DT Journal
LA English
AB Reactions between CN- and complexes of MnIII with trans-1,2-diaminocyclohexanetetraacetic acid (CyDTA) and hydroxyethylethylenediaminetriacetic acid (HEEDTA) were studied spectrophotometrically at the .lambda.maxs of their resp. hydroxo species under pseudo-I-order conditions. The forward reaction is 1st-order with respect to both the metal complex and [CN-]. The kinetics of the reverse reaction, i.e. the reaction between [Mn(CN)6]3- and CyDTA4- or HEEDTA3- (taken in large excess) were followed spectrophotometrically. In both systems, the reactions follow 1st-order kinetics each in [Mn (CN)6]3- and the resp. ligand concn. and an inverse 1st-order dependence in [CN-]. A 6 step mechanism is proposed for the forward reaction where the 5th step is the rate-detg. one. PH, ionic strength and temp. dependences were studied for both systems.
IT 131611-96-6 131629-60-2
RL: RCT (Reactant)
(substitution reaction of, with cyanide, kinetics and mechanism of)
RN 131611-96-6 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']hydroxy- (9CI) (CA INDEX NAME)



RN 131629-60-2 HCAPLUS
CN Manganate(1-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)glycinato(3-)]hydroxy- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l74 10

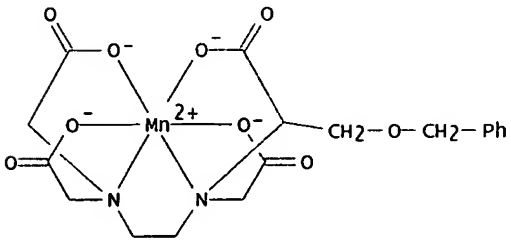
L74 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1988:403477 HCAPLUS
DN 109:3477
TI Paramagnetic chelates for NMR imaging, their preparation, compositions containing them, and their use
IN Felder, Ernst; Fumagalli, Luciano; Uggeri, Fulvio; Vittadini, Giorgio
PA Bracco Industria Chimica S.p.A., Italy
SO Eur. Pat. Appl., 47 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 230893	A2	19870805	EP 1987-100274	19870112
	EP 230893	A3	19880601		
	EP 230893	B1	19900613		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 1324150	A1	19931109	CA 1987-526867	19870107
	AT 53571	E	19900615	AT 1987-100274	19870112
	ES 2031832	T3	19930101	ES 1987-100274	19870112
	AU 8767539	A1	19870806	AU 1987-67539	19870113
	AU 591225	B2	19891130		
	JP 62195388	A2	19870828	JP 1987-18773	19870130
	JP 03064504	B4	19911007		
PRAI	IT 1986-19236		19860130		
	EP 1987-100274		19870112		

AB Paramagnetic chelates for nuclear spin tomog., [RO(CH2)mCH(CO2Z)N(R1)R2.Ma+]b-Eb+ [I; R = H, (OH-substituted) C1-8 alkyl, C1-4 aliph. aralkyl, (un)substituted Ph, C3-150 and O1-50 (poly)oxa-alkyl; R1 = CH2CO2Z, CH(Me)CO2Z, (CH2)2N(CH2CO2Z)2, OH aralkyl, OH pyridylalkyl, etc.; R2 = R1, (CH2)nX(CH2)nN(R1)R3, CH(Me)CH(Me)N(R1)R3, C3-7 ring-N(R1)R3; R3 = CH2CO2Z, CH(Me)CO2Z, RO(CH2)mCH(CO2Z); X = chem. bond, O, S, NH, N, CH2CO2Z, NCH(Me)CO2Z; Z = H, unit of neg. charge; m = 1-5, n = 2-3; b = 0-4; Ma+ = Fe2+, Fe3+, Gd3+, Mn2+; Eb+ = ion of alkali metal, alk. earth metal, (polyhydroxy)alkyl ammonium, alkanol ammonium, basic protonated amino acid], are prepd. by reacting polyaminopolycarboxylic acids, RO(CH2)mCH(CO2H)N(R1)R2 (II), with salts, oxides, or hydroxides of Ma+. Imaging compns. and methods of use are also disclosed. II [R = PhCH2; m = 1, R2 = (CH2)2N(R1)R3; R1 = R3 = CH2CO2H], prepd. by reacting 3-phenylmethoxyl-2-chloropropionic acid with ethylenediamine and the resulting product with bromoacetic acid, was treated with N-methyl-D-glucamine and MnCl2 to make the N-methylglucamine salt of the Mn complex. The LD50 was 1177 mg/kg mouse given i.v. or 8329 mg/kg given orally.

IT 113662-20-7P 113662-21-8P 113773-98-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for tomog.)

RN 113662-20-7 HCAPLUS
CN Manganate(2-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(carboxymethyl)-O-(phenylmethyl)-L-serinato(4-)]-, dihydrogen (9CI) (CA INDEX NAME)



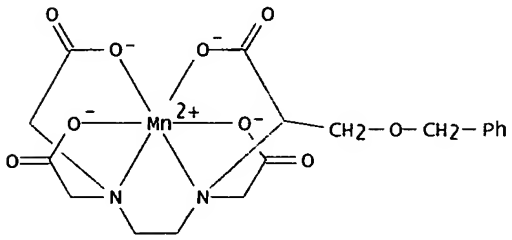
●2 H+

RN 113662-21-8 HCAPLUS
CN Manganate(2-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(carboxymethyl)-O-

(phenylmethyl)-L-serinato(4-)]-, dihydrogen, compd. with
2-amino-2-(hydroxymethyl)-1,3-propanediol (1:2) (9CI) (CA INDEX NAME)

CM 1

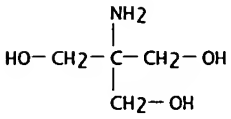
CRN 113662-20-7
CMF C18 H20 Mn N2 O9 . 2 H
CCI CCS
CDES *



●2 H^+

CM 2

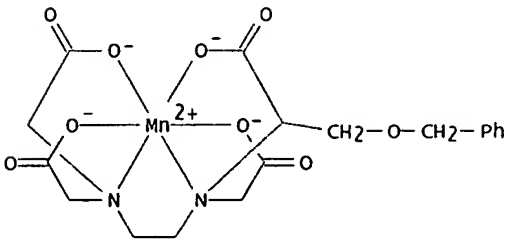
CRN 77-86-1
CMF C4 H11 N O3



RN 113773-98-1 HCAPLUS
CN D-Glucitol, 1-deoxy-1-(methylamino)-, [N-[2-[bis(carboxymethyl)amino]ethyl
]-N-(carboxymethyl)-O-(phenylmethyl)-L-serinato(4-)]manganate(2-) (2:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 113662-20-7
CMF C18 H20 Mn N2 O9 . 2 H
CCI CCS
CDES *

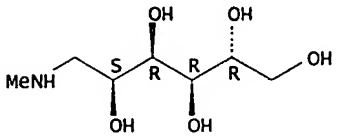


●2 H^+

CM 2

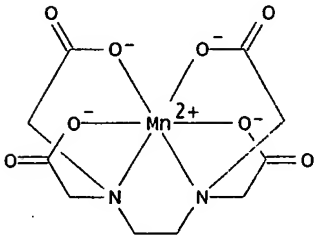
CRN 6284-40-8
CMF C7 H17 N O5
CDES *

Absolute stereochemistry.



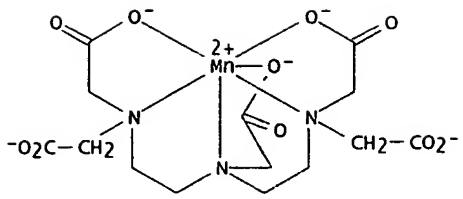
=> d bib abs hitstr l74 11

L74 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1987:614200 HCAPLUS
DN 107:214200
TI Paramagnetic complexes of manganese(II), iron(III), and gadolinium(III) as contrast agents for magnetic resonance imaging. The influence of stability constants on the biodistribution of radioactive aminopolycarboxylate complexes
AU Fornasiero, Daniel; Bellen, Johan C.; Baker, Richmond J.; Chatterton, Barry E.
CS Dep. Nucl. Med., R. Adelaide Hosp., Adelaide, 5000, Australia
SO Invest. Radiol. (1987), 22(4), 322-7
CODEN: INVRAV; ISSN: 0020-9996
DT Journal
LA English
AB Paramagnetic complexes of Mn(II), Fe(III), and Gd(III) with many ligands appear to undergo ligand substitution in vivo, producing biodistribution data similar to the hydrated metal ions. To identify ligands likely to be valuable in the prepn. of paramagnetic contrast agents, a series of aminopolycarboxylate complexes with stability consts. increasing in the order iminodiacetic acid < nitrilotriacetic acid < EDTA < CDTA .ltoreq. DTPA was prepd. with 54Mn(II), 59Fe(III), and 153Cd(III) at both tracer and carrier levels. Biodistribution studies in mice suggested that complexes remained unchanged in vivo if their stability consts. were .apprx.1016 for Mn(II) and Gd(III) and >1022 for Fe(III) complexes at tracer levels. Metal complexes with added carrier appeared to be effectively more stable in vivo, possible due to dissocn. and satn. of metal-binding sites. To avoid the accumulation of metal ions in tissues, new paramagnetic contrast agents contg. these metal ions will require stability consts. equal to or greater than those identified here.
IT 55448-20-9P 56731-38-5P 71184-38-8P
108917-52-8P 108917-53-9P 108935-88-2P
RL: BOC (Biological occurrence); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(prepn. and biodistribution of, magnetic resonance imaging in relation to)
RN 55448-20-9 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, dihydrogen, (OC-6-21)- (9CI) (CA INDEX NAME)



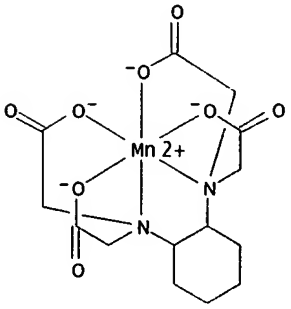
●2 H^+

RN 56731-38-5 HCAPLUS
CN Manganate(3-), [N,N-bis[2-[[(carboxy-.kappa.O)methyl](carboxymethyl)amino-.kappa.N]ethyl]glycinato(5-)-.kappa.N,.kappa.O]-, trihydrogen (9CI) (CA INDEX NAME)



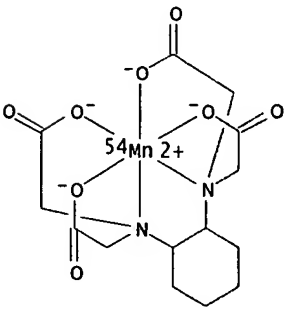
● 3 H+

RN 71184-38-8 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, [OC-6-21-(trans)]- (9CI) (CA INDEX NAME)



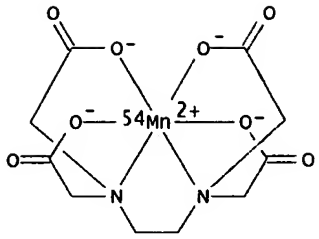
● 2 H+

RN 108917-52-8 HCAPLUS
CN Manganate(2-)-54Mn, [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, (OC-6-21)-(9CI) (CA INDEX NAME)



● 2 H+

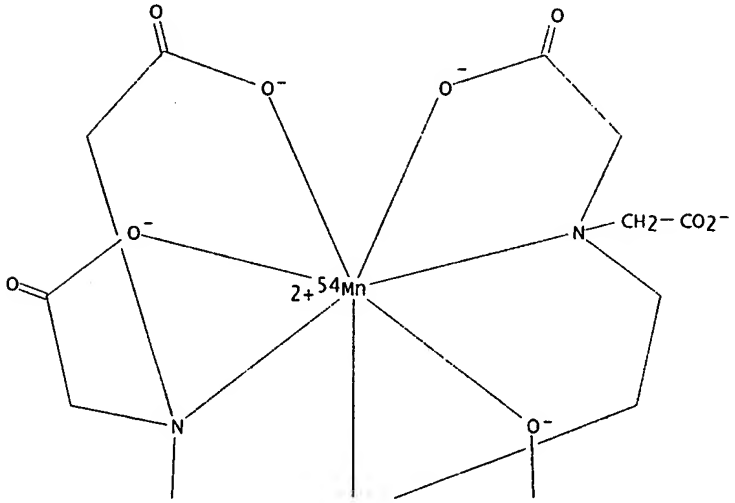
RN 108917-53-9 HCAPLUS
CN Manganate(2-)-54Mn, [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, dihydrogen, (OC-6-21)-(9CI) (CA INDEX NAME)



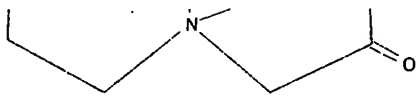
●2 H^+

RN 108935-88-2 HCAPLUS
CN Manganate(3-)-54Mn, [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]-, trihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



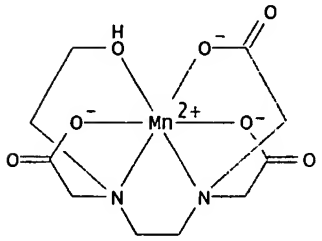
PAGE 2-A



●3 H^+

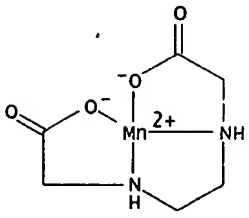
=> d bib abs hitstr l74 12

L74 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1987:80802 HCAPLUS
DN 106:80802
TI Catalysis of superoxide dismutation by manganese aminopolycarboxylate complexes
AU Koppenol, W. H.; Levine, F.; Hatmaker, T. L.; Epp, J.; Rush, J. D.
CS Dep. Chem., Univ. Maryland, Catonsville, MD, 21228, USA
SO Arch. Biochem. Biophys. (1986), 251(2), 594-9
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
AB Complexes of Mn, Cu, Co, and Fe with a variety of aminopolycarboxylates at concns. from 2 .times. 10-7 to 3 .times. 10-6M were tested for superoxide dismutase activity with horse ferricytochrome c as the competing reagent for O2-. In the presence of excess ligand only manganous nitrilotriacetate and manganous ethylenediaminediacetate showed activity with catalytic rate consts. of 2.2 .times. 107 and 1.8 .times. 107 M-1s-1, resp., at pH 6, 22.degree., and 10 mM ionic strength. These rate consts. decrease considerably at higher pH. Manganous N-hydroxyethylethylenediaminetriacetate is oxidized by O2- but apparently does not have catalytic activity. From the exptl. conditions under which the 2 complexes mentioned above exhibit catalysis, and the inactivity of other metal chelates, it is concluded that an open coordination site is essential but not sufficient to catalyze the dismutation reaction.
IT 106143-92-4
RL: RCT (Reactant)
(oxidn. of, by superoxide)
RN 106143-92-4 HCAPLUS
CN Manganate(1-), [N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)glycinato(3-)]-, hydrogen (9CI) (CA INDEX NAME)



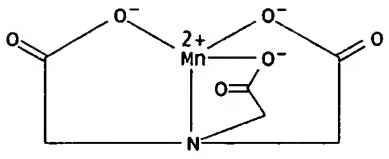
● H+

IT 29977-09-1 106143-93-5
RL: BIOL (Biological study)
(superoxide dismutation catalysis by)
RN 29977-09-1 HCAPLUS
CN Manganese, [[N,N'-1,2-ethanediylbis[glycinato]](2-)-N,N',O,O']- (9CI) (CA INDEX NAME)



RN 106143-93-5 HCAPLUS
CN Manganate(1-), [N,N-bis(carboxymethyl)glycinato(3-)-N,O,O',O'']-,

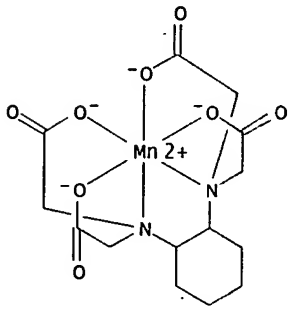
hydrogen, (T-4)- (9CI) (CA INDEX NAME)



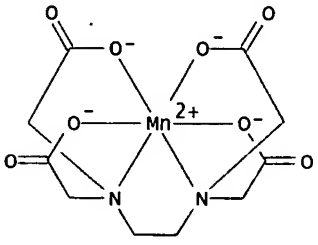
● H^+

=> d bib abs hitstr l74 13

L74 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1980:413822 HCAPLUS
DN 93:13822
TI Enthalpies and entropies of activation of the oxidation of manganese(II) aminopolycarboxylate complexes by bromine and tribromide ion
AU Vierling, Francois
CS Ec. Natl. Super. Chim., Univ. Louis-Pasteur, Strasbourg, 67008, Fr.
SO Bull. Soc. Chim. Fr. (1980), (3-4, Pt. 1), 144-8
CODEN: BSCFAS; ISSN: 0037-8968
DT Journal
LA French
AB The 1-electron redn. of Br2 occurs in oxidn. reactions of aminopolycarboxylate complexes of Mn(II) by halogens in which an inner-sphere mechanism is involved. The approach of the inner coordination spheres of Mn(II) complexes and the Br2 or Br3- ion requires a comparable energy, regardless of the nature of the ligand: EDTA or CyDTA. The activation entropies are all very neg.; the activated complex structure is closer to that of the inner-sphere intermediate than to that of the reaction product.
IT 14650-07-8 52279-49-9
RL: RCT (Reactant)
(oxidn. of, by bromine and tribromide, kinetics and mechanism of)
RN 14650-07-8 HCAPLUS
CN Manganate(2-), [[rel-N,N'-(1R,2R)-1,2-cyclohexanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)

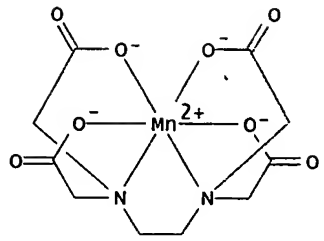


RN 52279-49-9 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)



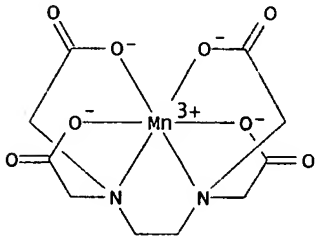
=> d bib abs hitstr l74 14

L74 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1979:621629 HCAPLUS
DN 91:221629
TI Superoxide and manganese(III). Reactions of manganese -EDTA and manganese-CyDTA complexes with molecular oxygen. X-ray structure of potassium manganese-EDTA.2 water
AU Stein, Judith; Fackler, J. P., Jr.; McClune, Gregory J.; Fee, James A.; Chan, L. T.
CS Dep. Chem., Case West. Reserve Univ., Cleveland, OH, 44106, USA
SO Inorg. Chem. (1979), 18(12), 3511-19
CODEN: INOCAJ; ISSN: 0020-1669
DT Journal
LA English
AB The reactions of MnIIIL-, MnIIL2-, and MnIIICyDTA- (H4L = EDTA; H4CyDTA = 1,2-cyclohexanediaminetetraacetic acid) with superoxide were studied in both aq. and nonaq. solvents. In anhyd. Me2SO, the redn. of MnIIIL- to MnIIL2- by superoxide was characterized by stopped-flow kinetic measurements, rapid-scan spectrophotometry, ESR, and cyclic voltammetry. The reaction is 2nd order with a rate const. of 5 .times. 104 M-1 s-1 at 20.degree.. The reaction of MnIIICyDTA- is analogous, having a rate const. of .apprx.1 .times. 106 M-1 s-1. Addn. of superoxide to a MnIIL2- soln. in Me2SO produces a green intermediate which changes to a yellow-brown final product. Although Mn aminocarboxylate complexes do not catalyze the dismutation of superoxide in aq. soln., the complexes do react with superoxide. MnIIIL- is reduced to MnIIL2- by superoxide in H2O. MnIIL2- and superoxide interact to form a blue intermediate which dissocs. to regenerate MnIIL2- and the spontaneous dismutation products. The reactions of Mn aminocarboxylate complexes with H2O2, Na peroxide, and dioxygen in Me2SO are also discussed. The crystal and mol. structure of KMnL.2H2O was detd. by single-crystal x-ray diffraction techniques by using 1684 unique reflections in the range 2.degree. .ltoreq. 2.theta. .ltoreq. 50.degree.. KMnL.2H2O crystallizes in the orthorhombic space group P212121 with a 6.579(1), b 23.161(7), and c 10.054(3) .ANG.. There are 4 mols. in the unit cell. Refinement of the non H atoms by least-squares procedures gave a final R1 value of 0.065. In the complex anion, the Mn is coordinated by the hexadentate EDTA ligand producing a distorted octahedral MnN2O4 geometry. The closest H2O mol. is >4 .ANG. away from the Mn. The K counterion is coordinated to 6 O atoms from carboxylate and H2O groups. Av. Mn-N and Mn-O (2 types) bond lengths are 2.22(1), 2.03(1), and 1.90(1) .ANG.. The presence of 2 short Mn-O bonds and 4 long Mn-O and Mn -N bonds is opposite to the distortions obsd. in the 3d9 CuN2O4 complexes, wherein the metal-O bonds are generally longest, a result thought to be consistent with Jahn-Teller effects. The diffusion coeffs. of chem. prepd. O2- solns. and of dioxygen in Me2SO were detd. by single-step chronoamperometry. These values, 1.1 .times. 10-5 and 2.93 .times. 10-5 cm2/s, resp., are in good agreement with less accurate values reported previously by other workers. The electrochem. of the aforementioned Mn aminocarboxylate complexes is also reported.
IT 15375-84-5
RL: RCT (Reactant)
(reactions of, with superoxide and peroxide ions and with oxygen)
RN 15375-84-5 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, disodium, (OC-6-21)-(9CI) (CA INDEX NAME)



● 2 Na^+

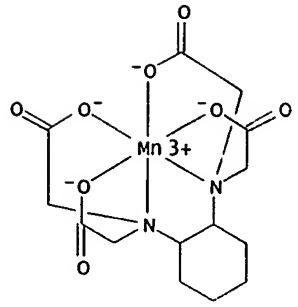
IT 66615-87-0
RL: RCT (Reactant)
(redn. by superoxide ion in aq. and di-Me sulfoxide solns. and crystal structure of)
RN 66615-87-0 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, dihydrate, (OC-6-21)- (9CI) (CA INDEX NAME)



● K^+

● 2 H_2O

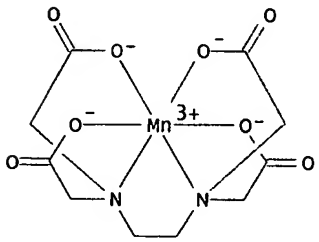
IT 38127-69-4
RL: RCT (Reactant)
(redn. of, by superoxide ion in di-Me sulfoxide, kinetics of)
RN 38127-69-4 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-(9CI) (CA INDEX NAME)



● K^+

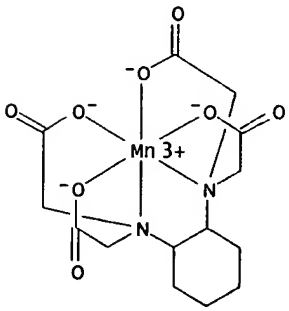
=> d bib abs hitstr l74 15

L74 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1979:620180 HCAPLUS
DN 91:220180
TI Photolysis of solutions of manganese(III) aminopolycarboxylates
AU Strel'mashok, V. E.; Poznyak, A. L.
CS Inst. Fiz., Minsk, USSR
SO Koord. Khim. (1979), 5(7), 1019-24
CODEN: KOKHDC
DT Journal
LA Russian
AB The photolysis of KMnL and KMnL' (H4L = EDTA, H4L' = 1,2-trans-cyclohexanediaminetetraacetic acid) were studied at 77 K in 2.5M Mg(ClO4)2 and the EPR and UV-visible spectra were recorded. The products of the photolysis were identified, and a mechanism for the formation of these products was discussed.
IT 15708-46-0 38127-69-4
RL: RCT (Reactant)
(photolysis of, in frozen aq. solns., mechanism of and product formation in)
RN 15708-46-0 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-(9CI) (CA INDEX NAME)



● K^+

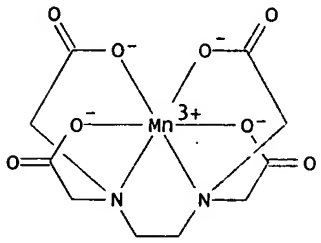
RN 38127-69-4 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-(9CI) (CA INDEX NAME)



K^+

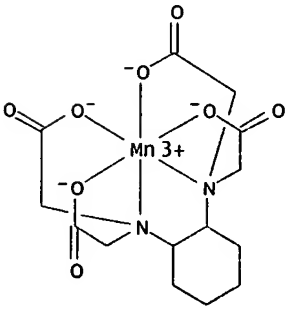
=> d bib abs hitstr l74 16

L74 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1975:3650 HCAPLUS
DN 82:3650
TI Thermal decomposition products of ethylenedinitrilotetraacetatomanganate(II) and trans-1,2-cyclohexylenedinitrilotetraacetatomanganate(III) complexes
AU Shirakashi, Takashi; Tanaka, Nobuyuki
CS Fac. Sci., Tohoku Univ., Sendai, Japan
SO Nippon Kagaku Kaishi (1974), (6), 1061-7
CODEN: NKAK88
DT Journal
LA Japanese
GI For diagram(s), see printed CA Issue.
AB Thermal decompn. of K [(ethylenedinitrilo)tetraacetato]manganate and K [(trans-1,2-cyclohexylenedinitrilo)tetraacetato]manganate gave ligands HO2CCH2NHCH2CH2N(CH2CO2H)2 (I) and II in addn. to the ligands of the starting compds. and CO, CO2, and CH2O. I and II were identified via their Co complexes. An intermol. electron transfer reaction is involved in the thermal decompn. in the solid state of the Mn complexes, which gives rise to new ligands.
IT 15708-46-0 38127-69-4
RL: RCT (Reactant)
(thermal decomposition of, mechanism of)
RN 15708-46-0 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-(9CI) (CA INDEX NAME)



● K^+

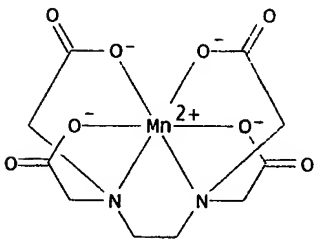
RN 38127-69-4 HCAPLUS
CN Manganate(1-), [[N,N'-(trans-1,2-cyclohexanediyl)bis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, potassium, (OC-6-21)-(9CI) (CA INDEX NAME)



K^+

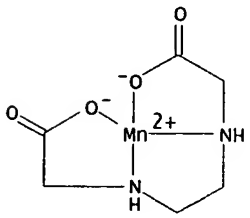
=> d bib abs hitstr l74 17

L74 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1974:541407 HCAPLUS
DN 81:141407
TI Oxidation of aminopolycarboxylate complexes of bivalent transition metals by halogens. Mechanism and free energy relations
AU Woodruff, William H.; Margerum, Dale W.
CS Dep. Chem., Purdue Univ., West Lafayette, Indiana, USA
SO Inorg. Chem. (1974), 13(11), 2578-85
CODEN: INOCAJ
DT Journal
LA English
AB The mechanisms of oxidn. of MIIL2- to the M(III) complexes by X2 and X3- are studied where M is Fe, Co, and Mn, X is I and Br, and L is EDTA and trans-1,2-diaminocyclohexanetetraacetate (CyDTA). The reactions are 1st order in MIIL2- concn. and 1st order in total halogen concn. The rate consts. for the Fe(II) reactions are 9-11 orders of magnitude greater than those for the analogous Mn(II) and Cd(II) reactions. A general mechanism for these reactions is proposed in which 1-electron redn. of the halogens takes place after inner-sphere coordination. However, the activation parameters and the rate consts. indicate that the position of the rate-detg. step differs with the reactant pairs examd. The rates of oxidn. of FeIIL2- by Br2, Br3-, and I2 appear to be controlled by the rate at which the oxidant enters the coordination sphere of the metal ion. The rates of oxidn. of FeIIL2- by I3- and of CoIIL2- and MnIIL2- by X2 and X3-are limited by the electron-transfer process subsequent to the coordination of the oxidant. Marcus-type free energy correlations are found for the latter inner-sphere reactions plus the reactions of V2+ (aq) and Fe2+ (aq) with halogens, spanning large ranges in the .DELTA.G0 value for the 1-electron redox reactions. This permits self-exchange electron-transfer rate consts. to be estimated as 8.5 .times. 104 M-1 sec-1 for I2 and I2- and 29 M-1 sec-1 for Br2 and Br2-.
IT 52279-49-9
RL: RCT (Reactant)
(oxidn. of, by bromine, kinetics and mechanism of)
RN 52279-49-9 HCAPLUS
CN Manganate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, (OC-6-21)- (9CI) (CA INDEX NAME)

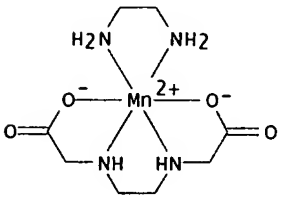


=> d bib abs hitstr l74 18

L74 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1970:407988 HCAPLUS
DN 73:7988
TI Thermodynamics of ion association. XXI. Mixed complexes of transition metal ions with aminopolycarboxylate and amine ligands
AU Degischer, G.; Nancollas, George H.
CS Dep. of Chem., State Univ. of New York, Buffalo, N. Y., USA
SO Inorg. Chem. (1970), 9(5), 1259-62
CODEN: INOCAJ
DT Journal
LA English
AB The assocn. of the divalent metal ions Mn, Co, Ni, Zn, and Cd with enthylenediaminediacetic acid (EDDA) and ethylenediaminedipropionic acid has been studied potentiometrically at 25.degree. and a const. ionic strength of 0.10M. A senstive calorimeter has been used to measure the enthalpy changes. The further assocn., with ethylenediamine, of these 1:1 complexes together with CuEDDA to form 1:1:1 mixed complexes has also been studied by the same methods. The thermodynamic functions are discussed in terms of the important factors involved in the assocn. reactions, adn the temp.-dependent and temp.-independent componets of .DELTA.H have been calcd.
IT 29977-09-1 29977-14-8
RL: PROC (Process)
(thermodynamics of formation of)
RN 29977-09-1 HCAPLUS
CN Manganese, [[N,N'-1,2-ethanediylbis[glycinato]](2-)-N,N',O,O']- (9CI) (CA INDEX NAME)

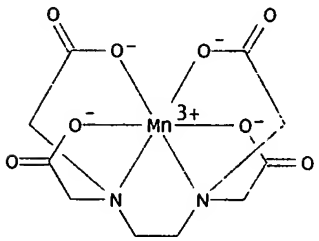


RN 29977-14-8 HCAPLUS
CN Manganese, (ethylenediamine)[(N,N'-ethylenediglycinato)(2-)]- (8CI) (CA INDEX NAME)



=> d bib abs hitstr l74 19

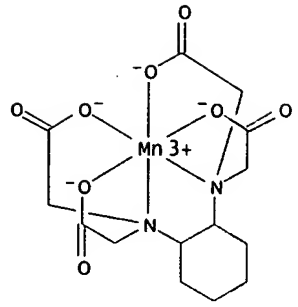
L74 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2001 ACS
AN 1967:34395 HCAPLUS
DN 66:34395
TI Preparation and characterization of some amino-polycarboxylate complexes of manganese(III)
AU Hamm, Randall E.; Suwyn, Mark A.
CS Washington State Univ., Pullman, Wash., USA
SO Inorg. Chem. (1967), 6(1), 139-42
CODEN: INOCAJ
DT Journal
LA English
AB The complexes of Mn(III) with trans-1,2-diaminocyclohexanetetraacetic acid (Cy-DTA), EDTA, and hydroxyethylethylenediaminetriacetic acid (HEDTA) were prepd. in the cryst. state. The absorption spectra of these compds. and the compds. prepd. from them by addn. of base were obtained. The rates of decompn. of the complexes in acidic soln. were established. The slowest decompn. was found for MnIIICyDTA- complex with a 1st-order rate const. of 6.8 .times. 10-6 sec.-1 at 25.degree.. MnIIIEDTA- and MnIIIHEDTA gave 1st-order rate consts. for decompn. of 1.2 .times. 10-5 and 4.2 .times. 10-5 sec.-1 at 25.degree.. The standard potentials for the reaction MnIII L + e- .dblarw. MnII L were detd. for the 3 complexes. These potentials showed all 3 complexes to be about equally good as oxidizing agents. The formation const. of the 3 Mn(III) complexes were calcd.
IT 12084-06-9P 12086-30-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 12084-06-9 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, hydrate (2:5), (OC-6-21)- (9CI) (CA INDEX NAME)



● K^+

● 5/2 H_2O

RN 12086-30-5 HCAPLUS
CN Manganate(1-), [[N,N'-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, potassium, hydrate (2:5), [OC-6-21-(trans)]- (9CI) (CA INDEX NAME)



● 5/2 H_2O

● K^+

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=> d bib abs l75 1

L75  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2001 ACS
AN   1999:464048  HCAPLUS
DN   131:82989
TI   Nitric oxide-releasing chelating agents and their therapeutic use
IN   Towart, Robertson; Karlsson, Jan Olof Gustav; Wistrand, Lars Goran;
     Malmgren, Hakan
PA   Nycomed Imaging A/S, Norway
SO   PCT Int. Appl., 48 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   WO 9933823         A1    19990708      WO 1998-GB3840   19981218
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
             KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
             MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
             TR, TT, UA
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
             CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9917702          A1    19990719      AU 1999-17702    19981218
     EP 1060174          A1    20001220      EP 1998-962567   19981218
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
PRAI GB 1997-27226      19971223
     US 1998-76793      19980304
     GB 1998-5450       19980313
     WO 1998-GB3840     19981218
OS   MARPAT 131:82989
AB   Chelating agents, in particular dipyridoxyl and aminopolycarboxylic
     acid-based chelating agents, and their metal chelates, when linked
     directly or indirectly to at least one nitric oxide-releasing moiety, or
     when use in combination with nitric oxide or a nitric oxide-releasing
     moiety, have been found to be effective in treating a variety of
     disorders.  In particular, such compds. may be used in treating conditions
     assocd. with the presence of free radicals in the body, e.g. reperfusion
     injuries, and in reducing the cardiotoxicity of anti-tumor agents, e.g.
     anthracyclines and/or paclitaxel.
RE.CNT  9
RE
(1) Keefer, L; US 5250550 A 1993 HCAPLUS
(3) Mooradian, D; JOURNAL OF CARDIOVASCULAR PHARMACOLOGY 1995, V25(4), P674
    HCAPLUS
(4) Nitromed Inc; WO 9639409 A 1996 HCAPLUS
(5) Robertson, T; WO 9749390 A 1997 HCAPLUS
(6) Salutar Inc; EP 0292761 A 1988 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT
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=> d bib abs l75 2

L75 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:344354 HCAPLUS
DN 129:31312
TI Granulates based on agglomerated colored clay particles, and their manufacture and use
IN Manz, Joachim; Molders, Armand
PA Cerdec Aktiengesellschaft Keramische Farben, Germany
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 842911	A1	19980520	EP 1997-119583	19971108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRAI DE 1996-19646944 19961113
AB The granulates are obtained by contacting spray granulated colorless clays with a soln. of .gtoreq.1 org. complexes of coloring metal ions. The granulates are used for manufg. unglazed clay tiles. Thus, 45.6 kg SG-FG (spray granulated colorless clay) was mixed with 3.6 kg Merapon 2005 (Co hydroxycarboxylate), and the resulting granules used for manufg. blue-stained clay tiles.

=> d bib abs l75 3

L75 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:84784 HCAPLUS
DN 128:227989
TI Synthesis of a new polyaminopolycarboxylic acid (BPHA) and its labeling with 99mTc
AU Liu, Guozheng; Liu, Boli
CS Isotope Department, China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China
SO J. Labelled Compd. Radiopharm. (1998), 41(2), 97-104
CODEN: JLCRD4; ISSN: 0362-4803
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB N,N'-Bis(2-aminoethyl)propanediamine hexaacetic acid (BPHA) has been prepd. as a tetrachloride salt. It has been characterized by 1H NMR, Pos. FAB MS, and elemental anal. BPHA is easily labeled with 99mTc in the pH range of 2-5 using SnCl2.cntdot.2H2O as reductant. The radioactive complex accumulates in both kidneys and liver and is fast excreted.

=> d ind 3

L75 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 78
ST technetium 99m polyaminopolycarboxylate complex prepn biodistribution
IT Kidney
Liver
(synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)
IT 14133-76-7DP, Tc-99, complex with N,N'-Bis(2-aminoethyl)propanediamine hexaacetic acid, biological studies 204633-60-3DP, technetium complex
RL: BPR (Biological process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)
IT 79-11-8, Chloroacetic acid, reactions 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-propanediamine 23288-61-1
RL: RCT (Reactant)
(synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)
IT 204633-59-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and biodistribution of polyaminopolycarboxylic acid 99mTc complex)

=> d bib abs l75 4

L75 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1994:477445 HCAPLUS
DN 121:77445
TI Development of new radiopharmaceuticals - technetium aminopolycarboxylate complexes
AU Havranek, E.; Bumbalova, A.; Krenek, P.; Komova, M.; Belakova, M.
CS Fac. Pharm., Comenius Univ., Bratislava, Slovakia
SO Pharmazie (1994), 49(5), 369-70
CODEN: PHARAT; ISSN: 0031-7144
DT Journal
LA English
AB Results are presented of studies of technetium-99m complexes with EDTA, EDDA and NTA derivs. as kidney imaging agents in rats. A list of the aminopolycarboxylate complexes and their biodistribution in rats are given.

=> d bib abs l75 5

L75 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:466706 HCAPLUS
DN 119:66706
TI New radiopharmaceuticals based on N-substitution of nitrilotriacetic acid
AU Havranek, E.; Bumbalova, A.; Belakova, M.; Komova, M.; Krenek, P.
CS Fac. Pharm., Comenius Univ., Bratislava, Czech.
SO J. Radioanal. Nucl. Chem. (1993), 175(3), 161-71
CODEN: JRNCDM; ISSN: 0236-5731
DT Journal
LA English
AB The labeling characteristics and biol. behavior in rats of the following 5 aminopolycarboxylic acid derivs. have been studied: N-(phosphonomethyl)nitrilodiacetic acid (99mTc-MPIDA), N,N-(diphosphono)aminoacetic acid (99mTc-GDP), N-(2-carbamoylethyl)nitrilodiacetic acid (99mTc-KEIDA), N-(2,3-dihydroxypropyl)nitrilodiacetic acid (99mTc-DPKA), and 2-[N-(2-hydroxyethyl)-N-carboxymethyl]aminopropanoic acid (99mTc-EAPA).

=> d bib abs l75 6

L75 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:230931 HCAPLUS
DN 116:230931
TI Preparation of polyaminopolycarboxylic acids and their chelation with metals, for use as contrast agents
IN Elgavish, Garbriel A.; Kim, Sung K.
PA Research Corp. Technologies, Inc., USA
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9114178	A1	19910919	WO 1991-US1633	19910311
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	US 5154914	A	19921013	US 1990-492519	19900312
	CA 2077556	AA	19910913	CA 1991-2077556	19910311
	EP 524984	A1	19930203	EP 1991-907102	19910311
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05505195	T2	19930805	JP 1991-506576	19910311
	US 5242681	A	19930907	US 1992-925352	19920804
	US 5370860	A	19941206	US 1993-100660	19930729
	US 5460799	A	19951024	US 1994-292477	19940818
PRAI	US 1990-492519	19900312			
	WO 1991-US1633	19910311			
	US 1992-925352	19920804			
	US 1993-100660	19930729			

OS MARPAT 116:230931
AB The polyaminopolycarboxylic acids [R1(CHR)b][R2(CHR)b]NCH2[CH2N[(CH2)bX]CH2]aCH2N[(CH2R)bR3][(CH2R)bR4] (R = H, alkyl, OH, halo, alkoxy, aryl, aralkyl; R1-R4, X = H, OH, CO2H, R5CO2, etc.; R5 = C6-30 hydrocarbyl; .gtoreq.1 R1-R4 or X = R5CO2; a = 0, 1-5; b = 1-5) are prepd. and complexed with metal ions (at. no. 21-29, 42-44, 57-83) to give contrast agents, esp. useful for NMR. N,N-Bis(benzyloxycarbonylmethyl)bromoacetamide (prepn. given) was reacted with N,N-bis(2-hydroxyethyl)ethylenediamine in Et3N-contg. DMF, to give an intermediate, which upon treatment with myristoyl chloride, in dimethylaminopyridine-contg. benzyl chloroformate, gave N-(myristoyloxyethyl)-N'-(2-benzyloxycarbonyloxyethyl)-N,N-bis[N'',N''-bis(benzyloxycarbonylmethyl)acetamido]-1,2-ethanediamine. This was hydrogenated over Pd/C, in EtOH, to give N-(2-myrisotyloxyethyl)-N'-(2-hydroxyethyl)-N,N'-bis[N'',N''-bis(carboxymethyl)acetamido]-1,2-ethanediamine (I). I was complexed with GdCl3.cntdot.6H2O and the 1:1 I-Gd+3 complex was incorporated into liposomes. The suitability of the complex as a contrast agent was demonstrated by NMR relaxivity measurements.

=> d bib abs l75 7

L75 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1990:433966 HCAPLUS
DN 113:33966
TI Kinetic and spectrophotometric determination of trace zinc(II) in the presence of a large amount of lead(II) using ligand-substitution reactions of their metalloporphyrins with EDTA
AU Tabata, Masaaki; Kajihara, Naoko
CS Fac. Sci. Eng., Saga Univ., Saga, 840, Japan
SO Anal. Sci. (1989), 5(6), 719-24
CODEN: ANSCEN; ISSN: 0910-6340
DT Journal
LA English
AB The formation const. of the lead(II) complex of 5,10,15,20-tetrakis(4-sulfonatophenyl)porphine (H2TPPS4) (log K) defined as Pb2+ + H2TPPS4 .dblharw. Pb(II)(TPPS4) + 2H+ is -9.97 .+-. 0.02, which is 109 times smaller than that of Zn(II)(TPPS4). In addn., Pb(II)(TPPS4) was rapidly replaced with EDTA with a half-life 200 ms. Zn(II)(TPPS4) is stable and does not react with EDTA even after 2 h. The large difference in the equil. and kinetic behavior between Zn(II)- and Pb(II)(TPPS4) allows the detn. of zinc(II) at as low as 10-7 mol dm-3 in the presence of 10-2 mol dm-3 lead(II). The molar absorptivity of Zn(II)(TPPS4) is 4.66 .times. 105 mol-1 dm3 cm-1. The method was applied to the detn. of zinc(II) in lead chems. (lead(II) nitrate, lead(II) acetate and lead metal) and in tap and waste waters by measurement of the absorbance at 421 nm. The optimum conditions of the ligand-buffer soln. contg. aminopolycarboxylates and lead(II) are described to remove the interference of copper(II), cobalt(II) and manganese(II).

=> d bib abs l75 8

L75 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1989:420474 HCAPLUS
DN 111:20474
TI Metal complexes of aminopolycarboxylic acids for diagnostic imaging
IN Gries, Heinz; Renneke, Franz-Josef; Weinmann, Hanns Joachim
PA Schering A.-G., Fed. Rep. Ger.
SO Ger. Offen., 15 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3621026	A1	19871223	DE 1986-3621026	19860620
	EP 250358	A2	19871223	EP 1987-730065	19870615
	EP 250358	A3	19881005		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DK 8703148	A	19871221	DK 1987-3148	19870619
	NO 8702590	A	19871221	NO 1987-2590	19870619
	JP 63005077	A2	19880111	JP 1987-151566	19870619
	AU 8774628	A1	19871224	AU 1987-74628	19870622
PRAI	DE 1986-3621025		19860620		
	DE 1986-3621026		19860620		

AB Aminopolycarboxylic acid complexes XO2CCH2N(CH2V1)CHR2CHR4NR1CHR5CHR3N(CH2V2)CH2CO2X [I; V1 = CO2X, CONR6R7; V2 = V1, COB; B = protein, lipid; R1 = H, CH2CO2X; R2, R3 = (CH2)m if R4 = R5 = H; R4, R5 = CH2CHR2(CH2)mif R2 = R3 = H; m = 0, 1; R6 = (OH-substituted) C2-7 alkyl; R7 = H, C1-7 alkyl, OH-substituted C2-7 alkyl; R8 = H, U(CH2)pC6H4W-protein; U = O, N, S; p = 1, 2; W = NN, NHCOCH2, NHCS, OCH2CO, OCH2CONHNH, NHCH2CO, NHCH2CONHNH, OCH2CONH(CH2)nCO; n = 1-15; X = H, metal ion equiv., cation of an inorg. or org. base or amino acid] are prepd. for use e.g. in NMR tomog. 2,6-Bis(aminomethyl)pyridine-3HCl was hydrogenated over Rh/C to 2,6-bis(aminomethyl)piperidine-3HCl, condensed with BrCH2CO2Et in the presence of AcNMe2 and K2CO3, and sapond. to produce 2,6-bis[N,N-bis(carboxymethyl)aminomethyl]-1-piperidineacetic acid (II), a complexing agent, in 57% yield. An aq. suspension of II was heated with Gd2O3 at 100.degree. for 3 h to produce the II Gd(III) complex, which was converted to the di-N-methylglucamine salt by suspending 58.76 g of the complex in 40 mL H2O and adding 0.18 g NMe2-HCl and 39.1 g N-methylglucamine. The soln. was made up to 100 mL with H2O, dispersed into ampuls, and heat-sterilized.

=> d ind 8

L75 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS
IC ICM C07D211-34
ICS C07D211-36; C07D413-06; A61K049-00; A61K049-04; C07D265-32
ICA C07D211-26; C07D265-32
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 23, 27
ST aminopolycarboxylate metal complex imaging diagnosis
IT Diagnosis
(aminopolycarboxylic acid complexes as contrast media and tracers for)
IT Scintigraphy
(aminopolycarboxylic acid complexes for)
IT Liposome
(aminopolycarboxylic acid complexes in, for diagnostic imaging)
IT Radiography
(contrast agents for, aminopolycarboxylic acid complexes as)
IT Sound and Ultrasound, biological effects
(imaging by, contrast media for, aminopolycarboxylic acid complexes as)
IT Phosphatidylcholines, biological studies
RL: BIOL (Biological study)
(liposomes contg. cholesterol and, aminopolycarboxylic acid complexes in, for diagnostic imaging)
IT Melanoma
(monoclonal antibody to, conjugates with aminocarboxylic acid complexes, for diagnostic imaging)
IT Tomography
(NMR, contrast agents for, aminopolycarboxylic acid complexes as)
IT Albumins, compounds

RL: ANST (Analytical study)
(conjugates, with aminopolycarboxylic acid complexes, for diagnostic imaging)

IT Antibodies
RL: ANST (Analytical study)
(monoclonal, to melanoma, conjugates with aminocarboxylic acid complexes, for diagnostic imaging)

IT Amino acids, compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(polybasic, complexes, prepn. of, for diagnostic imaging)

IT 7429-91-6D, Dysprosium, complexes with aminocarboxylic acids 7439-88-5D, Iridium, complexes with aminocarboxylic acids 7439-89-6D, Iron, complexes with aminocarboxylic acids 7439-91-0D, Lanthanum, complexes with aminocarboxylic acids 7439-96-5D, Manganese, complexes with aminocarboxylic acids 7439-98-7D, Molybdenum, complexes with aminocarboxylic acids 7440-00-8D, Neodymium, complexes with aminocarboxylic acids 7440-02-0D, Nickel, complexes with aminocarboxylic acids 7440-10-0D, Praseodymium, complexes with aminocarboxylic acids 7440-12-2D, Promethium, complexes with aminocarboxylic acids 7440-18-8D, Ruthenium, complexes with aminocarboxylic acids 7440-19-9D, Samarium, complexes with aminocarboxylic acids 7440-20-2D, Scandium, complexes with aminocarboxylic acids 7440-24-6D, Strontium, complexes with aminocarboxylic acids 7440-26-8D, Technetium, complexes with aminocarboxylic acids 7440-27-9D, Terbium, complexes with aminocarboxylic acids 7440-30-4D, Thulium, complexes with aminocarboxylic acids 7440-32-6D, Titanium, complexes with aminocarboxylic acids 7440-45-1D, Cerium, complexes with aminocarboxylic acids 7440-47-3D, Chromium, complexes with aminocarboxylic acids 7440-48-4D, Cobalt, complexes with aminocarboxylic acids 7440-50-8D, Copper, complexes with aminocarboxylic acids 7440-52-0D, Erbium, complexes with aminocarboxylic acids 7440-53-1D, Europium, complexes with aminocarboxylic acids 7440-54-2D, Gadolinium, complexes with aminocarboxylic acids 7440-55-3D, Gallium, complexes with aminocarboxylic acids 7440-56-4D, Germanium, complexes with aminocarboxylic acids 7440-60-0D, Holmium, complexes with aminocarboxylic acids 7440-62-2D, Vanadium, complexes with aminocarboxylic acids 7440-64-4D, Ytterbium, complexes with aminocarboxylic acids 7440-65-5D, Yttrium, complexes with aminocarboxylic acids 7440-74-6D, Indium, complexes with aminocarboxylic acids
RL: ANST (Analytical study)
(for diagnostic imaging)

IT 57-88-5, Cholesterol, biological studies
RL: BIOL (Biological study)
(liposomes contg. phosphatidylcholines and, aminopolycarboxylic acid complexes in, for diagnostic imaging)

IT 118860-16-5P 118860-18-7P 118860-23-4P 118860-24-5P 121136-79-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as complexing agent, diagnostic imaging in relation to)

IT 121227-38-1P 121227-40-5P 121227-41-6P 121227-42-7P 121252-35-5P 121252-36-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for diagnostic imaging)

IT 118860-17-6P 118860-19-8P 118860-21-2P 118889-39-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in complexing agent prepn., diagnostic imaging in relation to)

IT 105-36-2, Ethyl bromoacetate 111-42-2, reactions 40137-22-2 87032-71-1
RL: RCT (Reactant)
(reaction of, in complexing agent prepn., diagnostic imaging in relation to)

IT 38881-63-9
RL: RCT (Reactant)
(redn. of, in complexing agent prepn., diagnostic imaging in relation to)

=> d bib abs l75 9

L75 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1988:185725 HCAPLUS
DN 108:185725
TI Preparation of concentrated aqueous solutions containing trace elements, for plant growth stimulation.
IN Matsunaga, Michiko
PA Teikoku Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 2 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62138458	A2	19870622	JP 1985-278470	19851211
	JP 07010818	B4	19950208		

AB A fertilizer soln. is prepd. contg. polyaminopolycarboxylate, Fe, Mn, Zn, Cu, Co, and Mo salts, with or without H3BO3, in addn. to H3PO4 and NH3. An aq. fertilizer was prepd. from EDTA-Fe Na.cntdot.2H2O 3.14, EDTA-Co Na2.4H2O 0.204, EDTA Mo2O4Na2.cntdot.H2O 2.275, EDTA-Zn Na2.cntdot.4H2O 1.524, EDTA-Cu.cntdot.Na2.cntdot.3H2O 0.062, H3BO3 15.9, H2O 300 , 28 % aq. NH3 29.69 and H3PO4 3.84 g (pH 8.2). No pptn. was obsd. when the soln. was stored >1 mo.

=> d bib abs l75 10

L75 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1983:221787 HCAPLUS
DN 98:221787
TI Comparison of complexes with 99mTc and 99Tc using paper chromatography
AU Blaeuenstein, P.; Girgenrath, K.; Gasche, W.
CS Swiss Fed. Inst. React. Res., Wuerenlingen, CH-5303, Switz.
SO Anal. Chem. Symp. Ser. (1983), 13(Chromatogr. Biochem., Med. Environ. Res. 1), 199-201
CODEN: ACSSDR; ISSN: 0167-6350.
DT Journal
LA English
AB The rate of complex formation of 99Tc and 99mTc was studied by paper chromatog. using MeCN-H2O (2.5:1) as elution agent. Both isomers form the same products, but 99mTc produces a significant acceleration of the reaction. Changes in the reducing agent influences the redn. rate but not the product formed. The redn. rate increased in the order HSO3- < Sn < SnCl2. Investigation of com. DTPA-, EDTA-, and NTA-kits indicates slow complex formation but rapid redn. of 99mTcO4-. Although x-ray anal. of Tc-NTA complex was not completed, elemental anal. indicate the formula K2[Tc2O2(NTA)2].

=> d bib abs l75 11

L75 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1982:412562 HCAPLUS
DN 97:12562
TI Fibrous activated carbon loaded with metal-aminopolycarboxylic acid chelate as an ozone decomposition catalyst
PA Toho Beslon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 57059635	A2	19820410	JP 1980-135253	19800930

AB Fibrous activated C of sp. surface area 300-2000 m2/g, C6H6 adsorption rate const. .gtoreq.0.2/min, strength .gtoreq.15 kg/mm2, and diam. 3-25 .mu. is loaded with 0.01-20% metal aminopolycarboxylate, the metal being Cu, Ag, Zn, Cd, Cr, Mn, Co, Ni, Pd, or Fe. Thus, 90:10 acrylonitrile-Me acrylate fiber was made flame-resistant in air at 230-50.degree. for 6 h with strain to give 20% shrinkage and activated at 900.degree. for 10 h in steam. The activated C(1200 m2/g. 0.6/min, 25 kg/mm2, and 5 .mu., resp.) was soaked in 100 vols. of 0.8% aq. Cu-EDTA for 30 min, dried at 100.degree. for 1 h to be loaded with 2% Cu-EDTA, and a 0.05 g portion was filled in a 35 mm glass tube in 0.03 g/mL filling d. When air contg. 2 ppm O3 was passed over at 0.023 m3/min, O3 decompn. was 100 % after 50.

=> d bib abs l75 12

L75 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1982:82004 HCAPLUS
DN 96:82004
TI Technetium-99m complexes of EDTA analogs: studies of the radiochemistry and biodistribution
AU Baker, Richmond J.; Diamanti, Carol I.; Goodwin, David A.; Meares, Claude F.
CS VA Hosp., Palo Alto, CA, USA
SO Int. J. Nucl. Med. Biol. (1981), 8(2-3), 159-69
CODEN: IJNMCI; ISSN: 0047-0740
DT Journal
LA English
AB The prepn. of 99mTc aminopolycarboxylate complexes was carried out under anaerobic conditions using Sn ions as the reducing agent. Electrophoresis and TLC were used for anal., showing that DTPA, EDTA, and 1-methyl-EDTA prepns. contained most of the 99mTc radioactivity in the chelate form. Kinetics studies showed that binding to 1-phenyl-EDTA was slow. All compds. migrated towards the anode on electrophoresis, enabling sepn. from free TcO4- and reduced 99mTc. Quant. distribution studies in mice and computerized renograms in rabbits showed that renal clearance was the main excretory route, but all compds. were cleared more slowly than [131I]hippuran. The presence of the lipophilic Ph group in the EDTA mol. produced excretion partially by the binary route. These complexes belong to a series of bifunctional chelates which has the potential to produce new 99mTc-radiopharmaceuticals having the in vivo stability of 99mTc-EDTA.

=> d bib abs l75 13

L75 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1973:31849 HCAPLUS
DN 78:31849
TI Denture cleansers
IN Hill, William H.
PA Strong, Peter, and Co. Inc.
SO U.S., 5 pp. Continuation-in-part of U.S. 3,488,288 (CA 72;82984x).
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3704227	A	19721128	US 1969-878562	19691120

AB The efficiency of oxygen gassing in conventional powd. denture cleansers was improved by replacement of the activating agent or catalyst with .leq.5% of a stoichiometric chelate of EDTA with Co, Cu, Fe, Mn, or Ni.

=> d bib abs l75 14

L75 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 1971:7146 HCAPLUS
DN 74:7146
TI New complexanes. XIX. Complex-forming properties of the ethylenediamine-N,N'-diacetic-N,N'-(2,2'-dialkanecarboxylic) acids
AU Novak, Vladimir; Dvorakova, E.; Svicekova, Maria; Majer, Jaroslav
CS Fac. Pharm., Komensky Univ., Bratislava, Czech.
SO Chem. Zvesti (1969), 23(11-12), 861-8
CODEN: CHZVAN
DT Journal
LA English
AB The dissocn. consts. of 3 complexanes of the title acids (in which dialkanecarboxylic includes dibutyric, divaleric, and diisovaleric), and the stability consts. of their chelates with 24 central atoms (Group II and rare earth elements and Pb, Zn, Co, Mn) were detd. at 20.degree.. The stability consts. decreased with increasing no. of C atoms, but increased with increasing at. no. of the complex central atom.

2nd search


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=> d his

     (FILE 'HOME' ENTERED AT 09:49:45 ON 13 MAR 2001)

     FILE 'REGISTRY' ENTERED AT 09:50:52 ON 13 MAR 2001
                E SNCL2/CN
                E SNCL2/MF
                E STANNOUS CHLORIDE/CN
L1            2 S E3,E6          <-- SnCl2 & SnCl2·2H2O
                E STANNOUS FLUORIDE/CN
L2            2 S E3-5
                E STANNOUS BROMIDE/CN
L3            1 S E3
                E STANNOUS IODIDE/CN
L4            1 S E3
L5            1 S E4             - stannous ion
                E STANNOUS SULFATE/CN
L6            1 S E3
L7            1 S PYROPHOSPHATE/CN
L8            1 S GLUCEPTATE/CN
L9            1 S CARBON MONOXIDE/CN
                E CL2 SN . H2 O/MF
L10           1 S E3             <-- Cl2 mono hydrate

     FILE 'HCAPLUS' ENTERED AT 09:57:42 ON 13 MAR 2001
L11         752 S L5             Sn 2+ ion
L12        8221 S L1-4 OR L6 OR L10   Sn cpds
L13       94393 S L9             CO
L14       27553 S LYOPHIL? OR FREEZE(2W)(DRY? OR DRIED)
L15           0 S L14(L)L11
L16          10 S L14 AND L11
L17          12 S L12(L)L14
L18          63 S L12 AND L14
L19           0 S L16-18 AND L9
L20           0 S L16-18 AND MONOXIDE
L21           0 S L16-18 AND HEADSPACE
L22          39 S L16-18 AND (KIT OR CONTAINER OR VIAL)
L23           1 S L22 AND GAS
L24           0 S L22 AND ?MONOX?

     FILE 'REGISTRY' ENTERED AT 10:04:48 ON 13 MAR 2001

     FILE 'HCAPLUS' ENTERED AT 10:05:20 ON 13 MAR 2001
L25          73 S L8
L26        2466 S L7
L27       30427 S LACTOSE
L28           2 S L22 AND L25-27
L29      552235 S TC OR RE OR MN OR MANGANESE OR TECHNETIUM OR RHENIUM OR PERTE
L30           2 S L28 AND L29    2 cites
L31          37 S L22 NOT L30    37 cites  > cl 18 & 22
L32          36 S L13 AND L14
L33           5 S L32 AND L29
L34           5 S L33 NOT L22    5 cites
L35           0 S L34 AND (SN OR TIN OR STANNOUS)
L36           0 S L35 AND   (KIT OR CONTAINER OR VIAL)
L37           0 S L35 AND STORAGE
L38          60 S L13 AND HEADSPACE
L39           0 S L38 AND L29
L40           0 S L38 AND L11-12
L41           3 S L38 AND  (SN OR TIN OR STANNOUS)   3 cites - lyophilization w/ CO

     FILE 'REGISTRY' ENTERED AT 10:25:53 ON 13 MAR 2001
L42         374 S (TC OR RE)/ELS AND SN/ELS
L43        7648 S (TC OR RE OR MN)/ELS AND SN/ELS  > claim 27 cpds

     FILE 'HCAPLUS' ENTERED AT 10:26:38 ON 13 MAR 2001
L44         230 S L42
L45       11959 S L43
L46        1070 S AMINOPOLYCARBOX?
L47           0 S L45 AND L46
L48           0 S L45(L)L14
L49           4 S L45 AND L14    w/ ligands (L46) cl 30-42

     FILE 'USPATFULL' ENTERED AT 10:30:35 ON 13 MAR 2001
L50       45301 S LYOPHIL? OR FREEZE(2W)(DRY? OR DRIED)
L51        1146 S L1-4 OR L6 OR L10
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L52	5174	S	L9
L53	397145	S	TC OR RE OR MN OR MANGANESE OR TECHNETIUM OR RHENIUM OR PERTE
L54	42	S	L50 AND L52
L55	0	S	L54 AND L51
L56	8	S	L54 AND (SN OR TIN OR STANNOUS)
L57	31	S	L54 AND L53
L58	6	S	L56 AND L57
L59	1	S	L58 AND (KIT OR CONTAINER OR VIAL)
L60	52	S	(VIAL OR CONTAINER OR HEADSPACE)(5A)MONOXIDE
L61	18	S	L53 AND L60
L62	0	S	L61 AND (L51 OR SN OR TIN OR STANNOUS)
L63	6	S	L60 AND (L51 OR SN OR TIN OR STANNOUS)
L64	0	S	L53(5A)L60
L65	0	S	L54 AND L60
L66	16	S	L53(L)L60
L67	2	S	L53(P)L60

1 patent

3/6 is given (column not relevant)

In USPATFULL, I concentrated on the CO aspect of the invention — not much around

=> d bib abs hitstr l31 4

L31 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:114380 HCAPLUS
DN 132:171107
TI Lyophilized imaging agent formulation comprising a chemotactic peptide
IN Corbo, Diane C.; Link, Mary Jean M.; Williams, N. Adeyinka; Tomsho, Michelle L.; Bornstein, Michael; Solomon, Howard F.; Larsen, Scott K.; Suddith, Robert L.
PA Ortho Pharmaceutical Corp., USA; Johnson-Matthey Inc.
SO U.S., 25 pp., Division of U.S. Ser. No. 271,818, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6024938	A	20000215	US 1997-997894	19971224
PRAI	US 1994-271818		19940707		

AB A lyophilized imaging agent formulation comprises a targeting mol. such as antibody or chemotactic peptide, a linker such as diethylenetriaminepentaacetic acid (DTPA) or succinimidyl 6-hydrazinium nicotinate-HCl (SHNH), drying protectant such as mannitol, maltose or tricine, and excipient such as Polysorbate 80, in citrate buffer. The formulations are lyophilized and may be stored for extended periods of time. Following reconstitution with a diluent, the formulations are administered to a subject for scintigraphic imaging or therapeutic use. Also contemplated is a kit comprising a 2-vial system wherein a first vial comprises a lyophilized formulation of imaging agent in the form of a lyophilized cake, and a second vial comprises a carrier or diluent. The DTPA-IgG imaging agent was lyophilized in accordance with the following protocol. One-half (0.5) mL of a 4 mg/mL imaging agent formulation (DTPA-IgG) contg. saline 0.9, maltose 5, and Polysorbate-80 0.04% and pH 4.5 citrate buffer (80 mM) was lyophilized. The formulation was placed in a glass vial and the vial held in the lyophilizer at 5.degree. for one-half hour, after which time the temp. was ramped-down over 9 h to -50.degree.. The lyophilized vial was reconstituted with 2.0 mL 0.9% saline and the final formulation contained imaging agent 1 mg/mL in 20 mM citrate buffer, 1.25% maltose, 0.9% saline and 0.01% Polysorbate-80 at pH 4.5.
IT 7772-99-8, Tin chloride (SnCl2), biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lyophilized imaging agent formulation comprising chemotactic peptide)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

RE.CNT 45
RE
(1) Abrams, M; J Nucl Med 1990, V31(12), P2022 HCAPLUS
(2) Anon; EP 0314317 A1 1989 HCAPLUS
(3) Anon; WO 8911297 1989 HCAPLUS
(4) Anon; WO 9104056 1991 HCAPLUS
(5) Borrebaeck, C; J Immunol Meth 1989, V123, P157 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l31 5

L31 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:763693 HCAPLUS
DN 132:6403
TI Kit for the single step preparation of pentavalent technetium 99mTc(V)-DMSA
IN Efstratios, Chiotellis
PA N.C.S.R. "Demokritos"-Institut of Radioisotopes and Radiodiagnostic Products, Greece
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 960623	A2	19991201	EP 1999-600002	19990113
	EP 960623	A3	20000308		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI GR 1998-100018 19980113

AB Technetium 99m (V)-dimercaptosuccinic acid (DMSA) is a diagnostic imaging agent with clin. application in the diagnosis of myeloid thyroid carcinoma, of bone and soft tissue tumors and breast tumors. Furthermore, significant retention in bone metastases has been reported. The invention concerns a standardized formulation of a freeze-dried kit for the single-step prepn. of the radiopharmaceutical pentavalent technetium-99mTc(V)-dimercaptosuccinic acid only by the reconstitution of the freeze-dried kit content by adding an appropriate vol. of injectable soln. of sodium Pertechnetate-99mTc. Consequently, the kit formulation is developed to contain all necessary constituents in a stable in vitro compn. which enables the kit storage for three months. The vial content - lyophilized dry powder - is sterile and pyrogen free. The method of the kit prepn. comprises the mixt. of two DMSA solns. (A and B) of different compns. and acidity. The final soln. is prepd. by adding soln. B to soln. A; Lyophilization is taking place at zero .degree.C for 24 h, whereas vials are sealed inside the lyophilization chamber under dried and sterile nitrogen 99.999% pure. The whole procedure must be run under aseptic conditions. The cold kit should be stored in the freezer. The kit labeling with technetium-99m is achieved with the reconstitution or total dissoln. of the kit content by adding 2.5 mL of sodium pertechnetate-Tc99m injectable soln. of total radioactivity between 0.74 - 2.96 GBq (20-80 mCi). The method of labeling is therefore performed simultaneously with the kit reconstitution. Therefore the prepn. of the pentavalent technetium 99m(V)-dimercaptosuccinic acid is a very simple procedure, easy-to-use, efficient and pharmaceutically safe. The prepd. soln. of pentavalent technetium 99m(V)- dimercaptosuccinic acid may be used for 2.5 h after labeling when kept in the refrigerator (preservation conditions) conforming to the rules of protection against radiation.

IT 7772-99-8, Stannous chloride, biological studies
RL: CAT (Catalyst use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(kit for the single step prepn. of pentavalent technetium 99mTc(V)-DMSA)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 10

L31 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:600374 HCAPLUS
DN 129:172518
TI Process for preparing a radiodiagnostic agent for bone scintigraphy
IN Budsky, Frantisek; Kopecky, Petr; Prokop, Jiri
PA Ustav Jaderneho Vyzkumu Rez A.S., Czech Rep.
SO Czech Rep., 13 pp.
CODEN: CZXXED
DT Patent
LA Czech
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CZ 283251	B6	19980218	CZ 1995-1780	19950711

AB Diethylenetriamino-N,N,N',N',N'-pentakis(methylenephosphonic) acid (I) was prepd. by the reaction of diethylenetriamine trihydrochloride (prepd. from diethylenetriamine in abs. methanol with azeotropic HCl) with formaldehyde and orthophosphorous (phosphonic) acid. Its monocalcium trisodium salt of I was then prepd. by reaction with CaCO3 and NaOH. The following salt reaction with tin chloride (SnCl2) yielded a Sn2+ complex that was subsequently lyophilized in vials and mixed with eluate from the technetium 99mTc generator. Vials with 15-25 .mu.mol of I equiv. were mixed with 0.25-0.5 mL eluate contg. 250-2500 MBq 99mTc. The vial content when dissolved for use contains the labeled product which is stable at least for 5 h. The control assay for I content in vials used Dowex 50 removal of Ca and Sn and subsequent complexometric titrn. of I with ZnSO4 in ammonia/NH4Cl buffer with the Eriochrome Black T indicator. The tissue distribution of the agent radioactivity was detd. in rats at 1, 2, and 4 h after administration.

IT 7772-99-8, Tin chloride, reactions
RL: RCT (Reactant)
(diethylenetriamino-N,N,N',N',N'-pentakis(methylenephosphonic) acid 99mTc radiodiagnostic agent prepn. for bone scintigraphy)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

=> d bib abs hitstr l31 11

L31 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:391059 HCAPLUS
DN 129:166124
TI Catalytic protection of stannous ion by ascorbic acid in diphosphonic acids solutions
AU Liu, Guo-Zheng; Liu, Fei; Miao, Zeng-Xing; Wang, Yi-Shan; Fang, Ji-Dong
CS Isotope Department, China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China
SO Nucl. Sci. Tech. (1998), 9(2), 121-123
CODEN: NSETEC; ISSN: 1001-8042
PB Science Press
DT Journal
LA English
AB The protective ability of ascorbic acid (Vc) on stannous ion and the influence of light irradn. on the stability of stannous ion in diphosphonate medium at pH=5 have been examd. in order to attain minimal loss of stannous ion during the prodn. of lyophilized radiopharmaceutical kits. The sum of stannous ion and Vc was detd. with iodometric method. It was shown that the protective ability of Vc was still strong at Vc concn. much lower than that of stannous ion and the illumination by fluorescent lamp was unfavorable to the stability of stannous ion. The change of pH in the range 3.apprx.9 did not affect the action of Vc significantly.
IT 22541-90-8, Stannous ion, uses
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(catalytic protection of stannous ion by ascorbic acid in diphosphonic acids solns.)
RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn^{2+}

=> d bib abs hitstr l31 13

L31 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:226759 HCAPLUS
DN 128:286376
TI Radio-labeled pharmaceutical liposome compositions and kits
IN Shinkarenko, Leonid Lurya
PA Lipogenics Ltd., Israel
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5738868	A	19980414	US 1995-503662	19950718

AB A method for prepg. a radio-labeled liposome, the method including the steps of at least once dehydrating and rehydrating a treated liposome to form a binding liposome, and adding a radio label to said binding liposome to form the radio-labeled liposome. To 10 mL of a soln. of 10 mg/mL dilauroyl phosphatidylcholine in chloroform was added 10 mL water and the mixt. was stirred to obtain a suspension. The chloroform was then removed and replace with water, then 5 mL of a soln of 1.0 mg/mL stannous chloride was added to the liposome suspension and stirred for 10 min then lyophilized. To 5 mg of this treated liposome powder was added 1-2 mL 0.9% sodium chloride soln. under vacuum and the resulting mixt. followed by addn. of 30 mCi of sodium pertechnetate and the resulting mixt. incubated at room temp for 10-30 min. Between 90-95% binding efficiency was obtained.
IT 7772-99-8, Stannous chloride, reactions
RL: RCT (Reactant)
(radio-labeled pharmaceutical liposome compns. and kits)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

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=> d bib abs hitstr l31 14

L31 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:619167 HCAPLUS
DN 127:311470
TI Solid compositions containing new quinolones and reducing agents for radioimaging of inflammation due to bacterial infection
IN Sakuragi, Naoko; Kurokawa, Masahiro; Kadoki, Junko; Hatsushiba, Kiyonori; Yamaguchi, Toshiro
PA Daiichi Radioisotope Laboratories, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09243637	A2	19970919	JP 1996-70869	19960304

AB The compns. contain quinolone compds., preferably levofloxacin, and reducing agents, preferably SnCl2. The compns. are labeled with radioactive metals, e.g. 99mTc, just before the use. A HCl soln. of SnCl2 was mixed with an aq. soln. of levofloxacin and the soln. was frozen in a vial. The vial was thawed and the content was treated with 99mTc-pertechnetate to give a 99m-Tc-labeled imaging agent. The agent was injected into a rat i.m. infected with Escherichia coli at the right thigh to give a pos. image at the inflammatory site of the right thigh.
IT 7772-99-8, Stannous chloride, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(easily-labeled solid compn. contg. new quinolones and reducing agents for radioimaging of inflammation due to bacterial infection)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 15

L31 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:345978 HCAPLUS
DN 127:39662
TI Development of a stable single-vial formulation for a new technetium complex using bilayer lyophilization
AU Haby, Thomas; Thakur, Ajit; Nowotnik, David; Chan, Yee Wai; Linder, Karen; Varia, Sailesh
CS Bristol-Myers Squibb Pharmaceutical Research Institute, New Brunswick, NJ, USA
SO PDA J. Pharm. Sci. Technol. (1997), 51(2), 68-71
CODEN: JPHTEU; ISSN: 1076-397X
PB PDA, Inc.
DT Journal
LA English
AB The interaction between different components used in the prepn. of a new radiodiagnostic agent, BMS-181321, was overcome by its lyophilization as a bilayered product. BMS-181321 is composed of a nitroimidazole ligand BMS-181032, that is complexed with technetium-99m just before it is used in radionuclide imaging studies. Stannous chloride is required to reduce technetium from the +7 to the +5 oxidn. state before it can be complexed by the ligand. Because BMS-181032 is unstable in the presence of stannous chloride (when mixed in the liq. or solid state), the two components must be contained in sep. vials. A bilayered lyophile was manufd., contg. the ligand and stannous chloride in sep. layers in a single vial. The bilayered product was manufd. by first filling a soln. of the ligand into a vial and freezing the soln. A soln. contg. stannous chloride was then filled into the same vial on top of the frozen layer of ligand, and this second layer was also frozen. The two frozen layers were then lyophilized to a dry solid cake. The resulting bilayered product showed stability comparable to that seen when the ligand and the reducing agent were contained in sep. vials. The sepn. provided by the layering was sufficient to prevent any significant interaction between the reducing agent and the ligand.
IT 7772-99-8, Stannous chloride, reactions
RL: RCT (Reactant)
(development of stable single-vial formulation for new technetium complex using bilayer lyophilization)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 16

L31 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:211786 HCAPLUS
DN 126:274207
TI Study on the lyophilized product of 186Re(Sn)-HEDP kit
AU Bai, Hongsheng; Jin; Xiaohai; Wang, Fan; Du, Jin; Liu, Yuemin; Chen, Daming; Xu, Hailin
CS China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China
SO Tongweisu (1996), 9(4), 207-212
CODEN: TONGEM; ISSN: 1000-7512
PB Yuanzineng Chubanshe
DT Journal
LA Chinese
AB The prepn. of the frozen and dried product of 186Re(Sn)-HEDP kit was introduced, and the effective quantities of the components (HEDP, vitamin C and SnCl2.2H2O) in the kit were detd. At the same time, the effects of reaction time, temp. on the labeling efficiency and animal distribution were systematically studied. The initial animal expts. showed high uptake in the skeletal tissue and quick clearance in the blood.
IT 10025-69-1, Stannous dichloride dihydrate
RL: MSC (Miscellaneous)
(lyophilized product of 186Re(Sn)-HEDP kit)
RN 10025-69-1 HCAPLUS
CN Tin chloride (SnCl2), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

●2 H_2O

=> d bib abs hitstr l31 17

L31 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1996:634940 HCAPLUS
DN 125:257188
TI Stable multilayer lyophile comprising a radioligand and a compound which is chemically incompatible with the radioligand
IN Nowotnik, David P.
PA Bracco International B.V., Neth.
SO S. African, 21 pp.
CODEN: SFXXAB
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ZA 9409107	A	19950804	ZA 1994-9107	19941116
	AU 9510335	A1	19950703	AU 1995-10335	19941205
PRAI	US 1993-168100		19931214		
	WO 1994-IB390		19941205		

AB A stable multilayer lyophile comprising at least two layers, a first layer comprising a radioligand and a second layer comprising at least one component which is chem. incompatible with the radioligand in the first layer. Thus, 3,3,9,9-tetramethyl-1-(2-nitro-1H-imidazol-1-yl)-4,8-diazaundecane-2,10-dionedioxime was synthesized from N-(dimethylallyl)2-nitroimidazole (I) by a series of steps. A 2mL soln. contg. 2 mg of the radioligand I and 50 mg sulfated .beta.-cyclodextrin was filled into a vial and freeze-dried for 1 h at -50.degree.. A second layer (0.2 mL) contg. 0.025 mg $SnCl_2.2H_2O$ and 0.5 mg $CaNa_3DTPA.3H_2O$ was added on top of the first frozen layer and the vial was returned to -50.degree. and the bilayer product was then dried using a 60 h lyophilization cycle.

IT 10025-69-1, Stannous chloride dihydrate
RL: RCT (Reactant)
(stable multilayer lyophile comprising radioligand and compd. which is chem. incompatible with radioligand)
RN 10025-69-1 HCAPLUS
CN Tin chloride (SnCl2), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

●2 H_2O

IT 7783-47-3, Stannous fluoride 10031-24-0, Stannous bromide
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(stable multilayer lyophile comprising radioligand and compd. which is chem. incompatible with radioligand)
RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

RN 10031-24-0 HCAPLUS
CN Tin bromide (SnBr2) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br—Sn—Br

=> d bib abs hitstr l31 18

L31 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1996:38839 HCAPLUS
DN 124:66656
TI Method for production of radiolabeled drug product containing stannous salts
IN Dansereau, Raymond N.; Line, Bruce R.
PA Albany Medical College, USA
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9530443	A1	19951116	WO 1995-US5085	19950503

W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRAI US 1994-238467 19940505
AB A method for producing a radiolabeled drug prodrug which utilizes sterile drug ligand, sterile stannous ion, and sterile radiolabel to assure the suitability of the radiolabeled drug for in vivo usage is provided. Thus, 10 mg of dextran-70 was mixed with 0.33 mL of 0.9% NaCl injection and the soln. was added to Ultratag RBC (contg. tin chloride dihydrate 105 .mu.g max., Na citrate.2H2O 3.67 mg, and dextrose anhyd. 5.50 mg) in a lyophilized form and stored upon argon. To the content of the vial was added 1.48 Gbq Technetium 99m sodium pertechnetate and mixed and incubated at 22.degree. for 15 min. The in vivo stability of the product was shown in human subjects.
IT 7772-99-8, Stannous chloride, reactions 7783-47-3, Stannous fluoride
RL: RCT (Reactant)
(method for prodn. of radiolabeled drug product contg. stannous salts)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

=> d bib abs hitstr 131 19

L31 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:546611 HCAPLUS
DN 119:146611
TI Tumor imaging agent containing technetium compound
IN Pandian, Steve
PA USA
SO PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9313800	A1	19930722	WO 1993-US670	19930112
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9335921	A1	19930803	AU 1993-35921	19930112
PRAI	US 1992-821475		19920114		
	WO 1993-US670		19930112		

AB A radiochem. for detecting all types of tumors with a .gamma.-camera, comprises Me glyoxal bis(guanyl hydrazone) (I), SnCl2.cntdot.2H2O (II), and 99mTcO4-. A kit contg. freeze-dried I and II in a vial is also disclosed.

IT 10025-69-1, Stannous chloride dihydrate
RL: BIOL (Biological study)
(tumor imaging agent contg.)

RN 10025-69-1 HCAPLUS
CN Tin chloride (SnCl2), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

●2 H2O

=> d bib abs hitstr l31 20

L31 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:578869 HCAPLUS
DN 115:178869
TI Two-component kit with nonradioactive precursor for the preparation of an enantiomeric form of the liver function diagnostic agent, technetium-99m-labeled mercaptoacetyltriglycine
IN Noll, Bernhard; Johannsen, Bernd; Muenze, Rudolph; Spies, Hartmut
PA Zentralinstitut fuer Kernforschung Rossendorf, Fed. Rep. Ger.
SO Eur. Pat. Appl., 4 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 427360	A2	19910515	EP 1990-250271	19901023
	EP 427360	A3	19910605		
	EP 427360	B1	19940615		
	R: AT, DE, FR, GR, IT, NL				
	DD 288751	A5	19910411	DD 1989-334034	19891030
	DD 288751	B5	19940721		
	DD 288752	A5	19910411	DD 1989-334035	19891030
	DD 288752	B5	19940609		
	HU 58920	A2	19920330	HU 1990-6944	19901030
	HU 206774	B	19921228		
	CZ 278025	B6	19930317	CZ 1990-5316	19901030
	SK 277878	B6	19950607	SK 1990-5316	19901030
PRAI	DD 1989-334034	19891030			
	DD 1989-334035	19891030			

AB The 1st kit component comprises a lyophilized mixt. of mercaptoacetyltriglycine (MAG-3), a coligand which stabilizes the oxidn. stage +5 of Tc, a reducing agent, and an alkali metal or alk.-earth metal hydroxide. The coligand is a tartrate or gluconate. The 2nd kit component is a phosphate buffer soln., contg. acid corresponding to a molar ratio of MAG-3/hydroxide. MAG-3 was prepd. by sapon. of benzoyl-MAG-3 with NaOMe in MeOH. A kit was made, having as a 1st component a mixt. of MAG-3 0.2, di-Na tartrate-2H2O 22, NaOH 1.72 mg, and 60 .mu.g SnCl2.2H2O, and as the 2nd component a mixt. of 0.1M Na2HPO4 1.638, 0.1M NaH2PO4 0.382, and 1N HCl 0.04 mL. Prior to use, the 1st component was labeled with 99mTc reactor eluate and mixed with the 2nd component.
IT 7772-99-8, Tin(II) chloride, biological studies
RL: ANST (Analytical study)
(kit contg., for prepn. of metastable technetium-99-labeled diagnostic agent for kidney function detn.)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 21

L31 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:554532 HCAPLUS
DN 115:154532
TI Direct radiolabeling of antibodies and other proteins with technetium or rhenium using tin disulfide bond reducing agent pretreatment
IN Rhodes, Buck A.
PA USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 15

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9101754	A1	19910221	WO 1990-US4461	19900808
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	US 5078985	A	19920107	US 1989-391474	19890809
	CA 2065299	AA	19910210	CA 1990-2065299	19900808
	AU 9065434	A1	19910311	AU 1990-65434	19900808
	AU 650629	B2	19940630		
	EP 486622	A1	19920527	EP 1990-915377	19900808
	EP 486622	B1	19981104		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	JP 05508699	T2	19931202	JP 1990-514313	19900808
	JP 3070763	B2	20000731		
	AT 172879	E	19981115	AT 1990-915377	19900808
	ES 2125854	T3	19990316	ES 1990-915377	19900808
	JP 2000053590	A2	20000222	JP 1999-227755	19900808
	US 35457	E	19970218	US 1995-389267	19950216

PRAI US 1989-391474 19890809
JP 1990-514313 19900808
US 1990-565275 19900808
WO 1990-US4461 19900808

AB Proteins contg. .gtoreq.1 disulfide bonds are radiolabeled with Tc or Re radionuclides by: (1) reacting the disulfide bonds of the protein with a Sn(II) reducing agent to form Sn(II)-contg. and S-contg. complexes and Sn(IV) reaction byproducts, while preventing excessive fragmentation of the protein; (2) removing excess reducing agent, redn. byproducts, and any impurities to obtain reduced protein; (3) adding radionuclide, e.g. 99Tc (or Re) in the form of Na pertechnetate or perrhenate and pertechnetate or perrhenate reducing agent to reduce the Na pertechnetate or perrhenate and facilitate the labeling by ligand exchange, with the addn. in such a manner that further redn. of the protein is limited. The resulting product is stable and can be stored frozen or lyophilized. A Sn(II) disulfide bond reducing agent prepd. by adding 0.5 mM SnCl2 to a soln. contg. 40 mM K biphthalate and 10 mM Na tartrate at pH 5.6 was mixed with a IgG prepn. and kept at room temp. in the dark for 21 h for partial redn. of disulfide bonds. The reaction mixt. was then passed through a desalting column to remove excess Sn(II), Sn(IV) and other salt, and the reduced and Sn(II)-complexed protein fraction was concd. and frozen. A Sn(II) pertechnetate reducing agent, prepd. by the same method as above, was added to the frozen antibody and frozen. Na pertechnetate-99mTc with 2.5 mCi radioactivity was then added to the reduced antibody and mixed at room temp. for labeling. Thin layer chromatog. revealed that 99.6% of the radioactivity was protein bound and HPLC showed that the 99mTc elution paralleled the protein elution profile.

IT 7772-99-8, Tin chloride (SnCl2), biological studies
RL: BIOL (Biological study)
(soln. contg. potassium biphthalate and sodium tartrate and, for reducing disulfide bond in protein for radioactive labeling)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

=> d bib abs hitstr l31 22

L31 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1988:566469 HCAPLUS
DN 109:166469
TI A new method for the preparation of technetium-99m - stannous colloid instant kit
AU Chen, Shaoliang; Zhao, Huiyang
CS Zhongshan Hosp., Shanghai Med. Univ., Shanghai, Peop. Rep. China
SO Zhonghua Heyixue Zazhi (1988), 8(2), 90-1
CODEN: CITCDE; ISSN: 0253-9780
DT Journal
LA Chinese
AB For the prepn. of the title kit, NaF and SnCl2 were dissolved in water, titrated to pH 6.4 with HCl, filtered, placed in vials, and lyophilized. It could be used immediately after 99mTcO4 was added. It was suitable for i.v. administration as an imaging agent for liver, spleen, and bone marrow. In rats, 99mTc-Sn colloid was rapidly removed from blood and accumulated in liver; it was also nontoxic to rabbits.
IT 7772-99-8, Stannous chloride, biological studies
RL: BIOL (Biological study)
(in technetium-99m-tin colloid kit prepn., for scintigraphy)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr 131 23

L31 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1986:493726 HCAPLUS
DN 105:93726
TI Stable stannous chloride composition for labeling with radioactive technetium
IN Azuma, Makoto; Takahashi, Jun; Yamauchi, Hirohiko; Ueda, Nobuo
PA Nihon Medi-Physics Co., Ltd., Japan
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 179481	A2	19860430	EP 1985-113555	19851024
	EP 179481	A3	19880302		
	EP 179481	B1	19911023		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 61103841	A2	19860522	JP 1984-226395	19841026
	JP 05061256	B4	19930906		
	CA 1249514	A1	19890131	CA 1985-493739	19851024
	AU 8549064	A1	19860717	AU 1985-49064	19851025
	AU 583064	B2	19890420		
	US 4880616	A	19891114	US 1987-135527	19871217
	US 5015462	A	19910514	US 1989-362975	19890608
	US 5096693	A	19920317	US 1991-656202	19910215
PRAI	JP 1984-226395	19841026			
	US 1985-791474	19851025			
	US 1987-135527	19871217			
	US 1989-362975	19890608			

AB A stable, nonradioactive labeling compn. for prepn. of a 99mTc-labeled radiodiagnostic agent comprises lyophilized SnCl2 obtained from a highly concd. SnCl2 soln. charged in a container under an inert gas. For example, SnCl2 (0.01 M) in O2-free H2O was lyophilized in a vial under N2 atm. and the lyophilized SnCl2 was dissolved in sterilized O2-free H2O followed by mixing with 99mTc (as Na99mTcO4) to obtain 99mTc-labeled Sn colloid [Tc-(FDSn-COL)]. Tc-(FDSn-COL) exhibited an excellent distribution ability as a radioactive diagnostic agent in rats for liver scintigraphy by demonstrating >95% accumulation in the liver, whereas a 99mTc-labeled radioactive compn. prepd. by using 0.002 M SnCl2 showed a lower accumulation in the liver with higher accumulation in other organs. The compn. was stable for 6 h and 200 days when stored at room temp and 3-6.degree., resp.

IT 7772-99-8P, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(lyophilized stable prepn. of, for labeling with metastable technetium-99)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

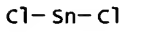
=> d bib abs hitstr l31 24

L31 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1986:174642 HCAPLUS
DN 104:174642
TI Technetium-99m composition for labeling proteinaceous material
IN Sundrehagen, Erling
PA Institutt for Energiteknikk, Norway
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8503231	A1	19850801	WO 1985-NO3	19850118
	W: DK, JP, NO				
	RW: AT, BE, CH, DE, FR, GB, NL, SE				
	EP 169232	A1	19860129	EP 1985-900781	19850118
	EP 169232	B1	19900425		
	R: AT, BE, CH, DE, FR, GB, LI, NL, SE				
	JP 61501321	T2	19860703	JP 1985-500424	19850118
	AT 52188	E	19900515	AT 1985-900781	19850118
	ES 539738	A1	19861016	ES 1985-539738	19850122
	DK 8504286	A	19850920	DK 1985-4286	19850920
	NO 8503687	A	19850920	NO 1985-3687	19850920
	NO 163938	B	19900507		
	NO 163938	C	19900815		
PRAI	SE 1984-325	19840123			
	EP 1985-900781	19850118			
	WO 1985-NO3	19850118			

AB Igs, leukocytes, erythrocytes, platelets, and proteins can be labeled with 99mTc for scintigraphic diagnosis of inflammation, infection, graft rejection, thrombosis, or embolism by using prepns. contg. pertechnetate-99mTc, a Sn2+ salt, an amino-, hydroxy-, or dihydroxybenzoic acid or salt to stabilize the Sn2+, and optionally a citrate or tartrate to minimize the formation of a 99mTc-Sn radiocolloid. Thus, a soln. of 5 mM 2,5-dihydroxybenzoic acid and 40 .mu.M Sn citrate was adjusted to neutral pH, sterilized by filtration, 0.5 mL was placed in vials and freeze-dried. Before use, the solids were dissolved in 0.5 mL pertechnetate 99mTc soln. in 0.9% saline obtained from a 99mTc/99Mo generator. Granulocytes obtained from 50 mL blood were suspended in the soln. for 30 min, 2 mL plasma was added, and the suspension was centrifuged. The cells were suspended in 2 mL plasma for injection.

IT 7772-99-8, biological studies
RL: RCT (Reactant)
(redn. by, of pertechnetate-Tc-99m in presence of amino-, hydroxy-, or dihydroxybenzoic acids, in technetium-99m labeling of proteins and cells)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)



IT 22541-90-8, biological studies
RL: RCT (Reactant)
(redn. by, of pertechnetate-Tc-99m in presence of amino-, hydroxy-, or dihydroxybenzoic acids, in technetium-99m labeling proteins and cells)
RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

=> d bib abs hitstr l31 25

L31 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1985:154782 HCAPLUS
DN 102:154782
TI Preparation of technetium-99m-fibrinogen
AU Marcilio de Almeida, Maria Apparecida T.; Goncalves da Silva, Constancia Pagano
CS Inst. Pesq. Energ. Nucl., Sao Paulo, Brazil
SO Publ. IPEN (1984), IPEN-Pub-62, 10 pp.
CODEN: PUIPDL; ISSN: 0101-3084
DT Report
LA Portuguese
AB The 99mTc labeled fibrinogen was prepd. using SnCl2 as a reducing agent for 99mTcO4-. A sample of 20 mg of fibrinogen was dissolved in 2 mL pH 8 carbonate buffer and .03 mL 0.2% SnCl2 was added. A sterile soln. of Na 99mTcO4 eluted from a Mo - Tc generator was immediately added. The mixt. was allowed to stand for 30 min; the yield was .apprx.70%. The lyophilized kits also gave a yield of 70 g, thus being suitable for medical applications.
IT 7772-99-8, biological studies
RL: BIOL (Biological study)
(in prepn. of technetium-99m-fibrinogen complexes)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=> d bib abs hitstr 131 26

L31 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1984:497713 HCAPLUS
DN 101:97713
TI Lyophilized radiographic imaging kit
IN Grogg, Terry Winton; Bugaj, Joseph Edward; Bates, Paul Edward
PA Mallinckrodt, Inc., USA
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 111415	A2	19840620	EP 1983-307386	19831205
	EP 111415	A3	19850508		
	EP 111415	B1	19900418		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4510125	A	19850409	US 1982-447863	19821208
	AT 52033	E	19900515	AT 1983-307386	19831205
	AU 8322179	A1	19840614	AU 1983-22179	19831207
	AU 562489	B2	19870611		
	JP 59112926	A2	19840629	JP 1983-229980	19831207
	JP 05082368	B4	19931118		
	ES 527890	A1	19841001	ES 1983-527890	19831207
	CA 1204662	A1	19860520	CA 1983-442701	19831207
PRAI	US 1982-447863	19821208			
	EP 1983-307386	19831205			

AB A dry-powder imaging kit is produced by prepg. a stabilizer soln. contg. a gentisate, ascorbate or reductate, contacting the soln. with a metal such as Sn or Sn-contg. alloys and lyophilization. The dry powder is then mixed with (99mTc]pertechnetate saline soln. from a com. 99mTc source. Thus, a skeletal imaging kit was obtained from a mixt. of di-Na hydroxymethanediphosphonate 3.0, gentisic acid 0.84, NaCl 30.0, and SnCl2 0.032 mg and Sn 5.5 g/vial. The vial was sterilized and lyophilized and an imaging kit was prepd. by adding 5 mL (99mTc]pertechnetate with an activity of 75 mCi. About 1 mL of the agent is slowly injected into a human and skeletal images are obtained.

IT 7772-99-8, biological studies 7783-47-3
RL: BIOL (Biological study)
(radiodiagnostic imaging kits contg. technetium-99-phosphonate complexes and)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

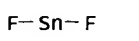
=> d bib abs hitstr l31 27

L31 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1982:168790 HCAPLUS
DN 96:168790
TI Method and reagent for making a radiopharmaceutical composition based on technetium-99m
IN Brockas, Anthony; Abrahams, Roy; Kelly, James Duncan
PA Amersham International Ltd., UK
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 46067	A1	19820217	EP 1981-303608	19810806
	EP 46067	B1	19850130		
	R: DE, FR, GB, IT				
	US 4427647	A	19840124	US 1981-286752	19810727
	JP 57059816	A2	19820410	JP 1981-125139	19810810
PRAI	GB 1980-26198		19800812		
	GB 1981-14935		19810515		

AB A radiopharmaceutical compn. based on 99mTc is prepd. by mixing an aq. soln. of pertechnetate with a reducing agent consisting of Sn or stannous ion to reduce the pertechnetate, and a complexing agent to form a complex with the reduced Tc. A nitrate and/or nitrite is incorporated in the compn. in an amt. to diminish the oxidn. of Sn2+ to Sn4+ during prepn. and storage of the complex. Bulk aq. solns. of methylene diphosphonate (I), SnF2 and NaNO3 were prepd. Aliquots were dispensed under N2 into vials to provide the following amts., I 5, SnF2 0.34, NaNO3 1 mg. The vials were dispensed and freeze-dried and the % loss of Sn ion was 0. These vials were reconstituted by addn. of 8 mL of eluent saline from a Tc generator having an activity of 200 mCi. After storing these injection solns. for 6 h, and the concn. of Sn2+ and pertechnetate were 6 .mu.g/mL and 0.1%, resp. Data for the biodistribution of these complexes are given.

IT 7783-47-3
RL: BIOL (Biological study)
(pertechnetate redn. with, for technetium-99 complexes prepn.)
RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)



=> d bib abs hitstr l31 28

L31 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1981:432328 HCAPLUS
DN 95:32328
TI Comparative examinations of 99mTc-DMS preparations obtained by labeling dimercaptosuccinate kits with different formulations. II. Comparison of chemical and biological characteristics of TcP-5 and MPI kits
AU Vanlic-Razumenic, N.
CS Lab. Radioisotopes, Boris Kidric Inst. Nucl. Sci., Vinca, 11000, Yugoslavia
SO Nuklearmedizin (Stuttgart) (1981), 20(1), 46-9
CODEN: NMIMAX; ISSN: 0029-5566
DT Journal
LA English
AB The chem. and biol. characteristics of 2 dimercaptosuccinate kits were examd. and compared: TcP-5 (produced at the Boris Kidric Institute - Vinca) in the freeze-dried form and MPI - the aq. soln. of Sn dimercaptosuccinate. The radiochem. compn. of the injection solns. was examd. by various methods and the method of ascending paper chromatog. in 50% aq. MeOH was found as satisfactory. Both prepns. had similar compns. Both prepns. showed max. renal concns. 3-4 h after injection. Liver uptake of MPI was higher than that of TcP-5. The bench-life of both prepns. was compared by measuring organ distribution. TcP-5 had a bench-life of at least 6 h with a kidney/liver uptake ratio from 5.60 to 8.52, whereas MPI had a satisfactory bench-life of <0.5 h after labeling; thereafter, hepatic concn. rose and the kidney/liver uptake ratio dropped to 1.64.
IT 7772-99-8, uses and miscellaneous
RL: PROC (Process)
(in freeze-dried technetium-99m-labeled dimercaptosuccinate prepns.)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 29

L31 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1981:197538 HCAPLUS
DN 94:197538
TI Optimizing the conditions for 99mTc-labeling in the tin-dimercaptosuccinic acid kit
AU Kovacheva-Marinova, S.; Georgieva, R.; Pantev, T.; Sheiretova, E.
CS Med. Akad., Sofia, Bulg.
SO Rentgenol. Radiol. (1980), 19(4), 295-303
CODEN: RENRAR; ISSN: 0486-400X
DT Journal
LA Bulgarian
AB Optimum conditions for labeling of a Sn-dimercaptosuccinic acid complex with 99mTc to give a product with high renal incorporation rate were reconstitution of the freeze-dried complex of the kit with 2 mL Na99mTcO4 for 15 min under N protection and use within 30 days.
IT 7772-99-8, biological studies
RL: BIOL (Biological study)
(in technetium-99 dimercaptosuccinate complex prepn., for scintigraphy)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=> d bib abs hitstr l31 30

L31 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1981:197537 HCAPLUS
DN 94:197537
TI Synthesis of dimercaptosuccinic acid and development of a kit for labeling it with technetium-99m
AU Kovacheva-Marinova, S.; Georgieva, R.; Pantev, T.; Sheiretova, E.
CS Med. Akad., Sofia, USSR
SO Rentgenol. Radiol. (1980), 19(4), 286-94
CODEN: RENRAR; ISSN: 0486-400X
DT Journal
LA Bulgarian
AB Dimercaptosuccinic acid (I) [2418-14-6] was prepd. from dibromosuccinic acid [526-78-3] with Na2CS3, followed by neutralization with H2SO4. A kit was prepd. contg. freeze-dried I and SnCl2 and Na99mTcO4 soln. The reagent for scintigraphy was prepd. by mixing the freeze-dried I and SnCl2 with the Na99mTcO4. The labeled complex had a pH of 3. Radioactivity accumulated in the kidneys of rabbits given i.v. injections from fresh kits, giving good visualization yet weak imaging of the liver and urinary bladder.
IT 7772-99-8, biological studies
RL: BIOL (Biological study)
(in technetium-99 dimercaptosuccinate complex prepn., for scintigraphy)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 31

L31 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1980:610320 HCAPLUS
DN 93:210320
TI Composition and method for labeling red blood cells with radioactive technetium: process and kit for preparing the composition
IN Kato, Makoto; Hazue, Masaaki
PA Nihon Medi-Physics Co., Ltd., Japan
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 11301	A1	19800528	EP 1979-104536	19791116
	R: DE, FR, GB, NL, SE				
	JP 55069517	A2	19800526	JP 1978-143956	19781120
	JP 61026887	B4	19860623		
	US 4313928	A	19820202	US 1979-95789	19791119
	CA 1133812	A1	19821019	CA 1979-340133	19791119
PRAI	JP 1978-143956		19781120		

AB A nonradioactive compn. for intracorporeal labeling of red blood cells with 99mTc comprises a pyridoxal, a Sn2+ salt, and .gtoreq.1 .alpha.-amino acid. The compn. is administered through a vein and assures efficient intracorporeal red blood cell labeling with 99mTc which is subsequently administered through the vein. A compn. was prepd. contg. pyridoxal-HCl [65-22-5] 3665, anhyd. SnCl2 37.9, L-(+)-ascorbic acid (stabilizer) 70 mg in 100 mL H2O to which was added L-isoleucine [73-32-5] 2361 mg/100 mL H2O with NaOH 1440 mg. Administration of this soln. followed by administration of saline soln. of Na pertechnetate-99mTc resulted in excellent intracorporeal labeling of red blood cells in rats. The nonradioactive compns. showed good stability in soln. and lyophilized form and low toxicity.

IT 7772-99-8, biological studies
RL: BIOL (Biological study)
(labeling solns. contg. amino acids and, for erythrocytes, with technetium-99)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr 131 32

L31 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1980:11168 HCAPLUS
DN 92:11168
TI Deterioration of stannous ion in radiopharmaceutical kits during storage
AU McBride, Martin H. D.; Shaw, Stanley M.; Kessler, Wayne V.
CS Diagn. Res. Dev. Dep., Squibb Inst. Med. Res., New Brunswick, NJ, USA
SO Am. J. Hosp. Pharm. (1979), 36(10), 1370-2
CODEN: AJHPA9; ISSN: 0002-9289
DT Journal
LA English
AB The deterioration of stannous ion (Sn2+) in inhouse-prepd. and com. radiopharmaceutical kits was studied. Sn2+ content of 3 types of nonlyophilized, deoxygenated, aq. inhouse-prepd. kits [(DTPA), pyrophosphate and glucoheptonate] and of 3 com. prepd. kits (2 lyophilized pyrophosphate kits and one diphosphonate in sealed glass ampul kit) was measured by differential pulse polarog. Inhouse-prepd. kits were assayed initially and after storage for 6, 12, 24 and 48 days at 24, 5 and -18.degree.. Com. kits were assayed initially and after storage for 12, 24 and 48 days at 5 and 24.degree.. Of the inhouse-prepd. kits, Sn2+ stability was greatest in the DTPA kits; even when stored at 24.degree. little deterioration was noted after 48 days. The inhouse-prepd. pyrophosphate and glucoheptonate kits showed substantial Sn2+ loss at 24.degree. after 6 days; they generally fared better at 5.degree.; at -18.degree., deterioration was min. All 3 com. kits exhibited a high degree of Sn2+ stability when stored for 48 days at 5 and 24.degree.. Freezer storage should be used, when possible, to insure max. stability of Sn2+ in inhouse-prepd.,nonlyophilized radiopharmaceutical kits. The com. products of nonlyophilization and of sealing the reagent in a sealed-glass ampul prolong Sn2+ stability.
IT 22541-90-8, biological studies
RL: BIOL (Biological study)
(deterioration of, in radiopharmaceutical kits, storage effect on)
RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn^{2+}

=> d bib abs hitstr l31 33

L31 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1979:174762 HCAPLUS
DN 90:174762
TI Tin(II) determination in technetium-99m-labeled Sn-DMSA
AU Liebscher, I.; Krogner, P.; Muenze, R.
CS Bereich 3rd., DAW, Dresden, E. Ger.
SO Radiochem. Radioanal. Lett. (1979), 37(6), 313-17
CODEN: RRALAZ; ISSN: 0079-9483
DT Journal
LA German
AB A polarog. method for the detn. of Sn(II) in the lyophilized Sn(II)-dimercaptosuccinic acid [Sn(II)-DMSA] [63130-02-9]-kit for the prodn. of 99mTc-DMSA is described. The error in the detn. of 2-4 .times. 10-7M Sn(II) was .+-.6%.
IT 22541-90-8, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in tin-dimercaptosuccinic acid complex by polarog.)
RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn^{2+}

=> d bib abs hitstr l31 34

L31 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1978:41704 HCAPLUS
DN 88:41704
TI Scintigraphy agent containing technetium-99m-labeled colloidal stannous fluoride
IN Laidler, John Barry; Stewart, Maurice Alexander Alfred
PA Radiochemical Centre Ltd., Engl.
SO Ger. Offen., 11 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2710728	A1	19770929	DE 1977-2710728	19770311
	DE 2710728	C2	19821223		
	GB 1535847	A	19781213	GB 1976-11295	19770304
	US 4087516	A	19780502	US 1977-775643	19770307
	AU 7723131	A1	19780914	AU 1977-23131	19770310
	AU 513150	B2	19801120		
	JP 52143231	A2	19771129	JP 1977-30988	19770318
	JP 57015089	B4	19820329		
	FR 2344282	A1	19771014	FR 1977-8353	19770321
	FR 2344282	B1	19820305		
PRAI	GB 1976-11295		19760319		

AB Aseptically-packaged 99Tcm-labeled SnF2 colloid scintig. agents contain Sn(II) 0.75-750; Na+, K+ or NH4+ 50-7000; and F- 40-5000 .mu.g. For example, 1 g NaF was dissolved in 1 L N-purged sterile aq. injection soln., 125 mg SnF2 was added, and the soln. was filtered, placed in 10 mL vials, and sealed under N. The vials were sterilized by .gamma.-irradn. The materials were reconstituted for i.v. injection by injection of 1-10 mL of sterile, isotonic Na99TcmO4 soln. into the sealed vials. The activity of the 99Tc labeled soln. in each vial was .apprx.2-50 mCi. When the compns. were administered to mice 1-5, 11-15 and 21-5 wk after 99Tcm-labeling of the freeze-dried product, 92.9, 92.4 and 90.0%, resp., of the total radioactivity was localized in the liver and spleen, showing that the compns. have good storage stability.

IT 7783-47-3DP, technetium-99 complexes
RL: PREP (Preparation)
(colloidal, prepn. of, for scintig.)
RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

=> d bib abs hitstr l31 35

L31 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1978:27834 HCAPLUS
DN 88:27834
TI Radiodiagnostic complexes employing fluorine-containing tin reducing agents
IN Hill, Brian K.; Kubik, Verna M.
PA Minnesota Mining and Mfg. Co., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4054645	A	19771018	US 1976-717173	19760824
	DE 2737932	A1	19780302	DE 1977-2737932	19770823
	JP 53026325	A2	19780311	JP 1977-101025	19770823
	FR 2362622	A1	19780324	FR 1977-25881	19770824

PRAI US 1976-717173 19760824
AB Radiodiagnostic agents for mammals comprise a radiocomplex which is the reaction product of 99Tcm-pertechnetate ion, a diagnostic ligand, and a tin fluoride reducing agent. The tin fluorides have improved resistance to hydrolysis and oxidn. compared to previously used SnCl2. Kits using NaSnCl3 were degraded faster than kits using NaSnF3 when exposed to accelerated heat aging. A radiodiagnostic soln. kit for imaging kidneys comprises a soln. of dimercaptosuccinic acid 90, NaSnF3 20 mg, and water to 100 mL. Two cc of this soln. was transferred to 10 mL vials and the kit lyophilized. The contents of each kit was dild. to 5.0 cc with N-saline and a vol. of 99Tcm-pertechnetate in saline, sufficient to provide 25-50 .mu.Ci/mL. One-tenth cc of the soln. was injected into mice for metabolic distribution of radioactivity detns. The agent showed good results for kidney imaging.
IT 7783-47-3
RL: BIOL (Biological study)
(as reducing agent, in radiodiagnostic kit)
RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

=> d bib abs hitstr 131 36

L31 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1977:78691 HCAPLUS
DN 86:78691
TI Dispersion for preparing an injectable radiopharmaceutical scanning agent
IN Wolfangel, Robert G.
PA Byk-Mallinckrodt Chemische Produkte G.m.b.H., Ger.
SO Ger. Offen., 19 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2617895	A1	19761209	DE 1976-2617895	19760423
	DE 2617895	B2	19791031		
	DE 2617895	C3	19800710		
	US 4048296	A	19770913	US 1975-581315	19750527
	AT 350192	B	19790510	AT 1976-3036	19760426
	AT 7603036	A	19781015		
	DD 125606	C	19770504	DD 1976-192656	19760503
	GB 1530193	A	19781025	GB 1976-20273	19760517
	NL 7605274	A	19761130	NL 1976-5274	19760518
	JP 51144718	A2	19761213	JP 1976-56748	19760519
	JP 58022012	B4	19830506		
	BE 842251	A1	19760916	BE 1976-167356	19760526
	SE 7606036	A	19761128	SE 1976-6036	19760526
	SE 430303	B	19831107		
	SE 430303	C	19840216		
	FR 2312235	A1	19761224	FR 1976-16123	19760526
	FR 2312235	B1	19781117		
	SE 8006060	A	19800829	SE 1980-6060	19800829
	SE 436970	B	19850204		
	SE 436970	C	19850523		

PRAI US 1975-581315 19750527
AB Dispersions for the prepn. of injectable scintigraphy scanning agents comprised a Sn-S colloid and a stabilizer in an aq. buffer soln. with pH 3-5 at 25.degree.. For example, 15.4 ml Na thiosulfate (100 mg/ml) was added to 103 mg 5N HCl, and 92.8 ml SnCl2 (10 mg/ml) was added after the reaction had ended. Glycine [56-40-6] (3465 mg 2N) and 387 ml 1N NaOH were added as a stabilizer and a buffer to adjust the pH to 3.2-3.5. The dispersion was dild. with H2O to 4544.2 ml, placed in 1 ml glass containers, and freeze-dried. Before use, the solns. were reconstituted and labeled with 99mTc.
IT 7772-99-8, biological studies
RL: BIOL (Biological study)
(reaction with sodium thiosulfate and hydrochloric acid)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

=> d bib abs hitstr l31 37

L31 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1975:47769 HCAPLUS
DN 82:47769
TI Aqueous liquid for scintigraphic skeleton production
IN Laidler, John B.
PA Radiochemical Centre Ltd.
SO Ger. Offen., 18 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2412314	A1	19740919	DE 1974-2412314	19740314
	GB 1417518	A	19751210	GB 1973-12320	19740213
	US 3984531	A	19761005	US 1974-442902	19740215
PRAI	GB 1973-12320		19730314		

AB The title liq. contains complexes of 99Tcm [14133-76-7] with Sn [7440-31-5] and fluorophosphate suitable for use as bone-scanning agents. The use of monofluorophosphate eliminates the drawbacks, particularly the slow absorption of tripolyphosphate employed by Subramanian and McAfee (1971). The prepn. contains Sn (SnF2 [7783-47-3] or SnCl2 [7772-99-8]), a monofluorophosphate (Na2PO3F [10163-15-2]), the molar ratio of monofluorophosphate to Sn being 30:1 to 500:1; and an amt. of 99Tcm sufficient for forming a Tc-Sn-phosphate complex sufficient for skeletal imaging (after being injected into a mammal organism). Ready-made kits of the prepn. consist of ampuls contg. a freeze-dried soln. of 50-200 mg Na monofluorophosphate and 0.5-3.0 mg SnF2 to which (prior to injection) an adequate amt. of 99Tcm is added to ampuls as an aq. soln. of the pertechnate ion. In expts. with male Wistar rats, 35.5-48.0% of the injected dose was absorbed by the bones. In the cases of 126 human patients, injection of 10-15 mCi doses of 99Tcm gave good skeletal imaging without detrimental side effects.

IT 7772-99-8 7783-47-3
RL: BIOL (Biological study)
(bone scintigraphy with solns. contg. technetium 99m)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

=> d bib abs l34 1

L34 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2001 ACS
AN 1994:306311 HCAPLUS
DN 120:306311
TI Oxidation of carbon monoxide on LaMn1-xCuxO3 perovskite-type mixed oxides
AU Yasuda, Hiroyuki; Fujiwara, Yoshiko; Mizuno, Noritaka; Misono, Makoto
CS Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan
SO J. Chem. Soc., Faraday Trans. (1994), 90(8), 1183-9
CODEN: JCFTEV; ISSN: 0956-5000
DT Journal
LA English
AB Catalytic oxidn. of CO was investigated over a series of LaMn1-xCuxO3 (x = 0-0.5) and La2CuO4 catalysts having perovskite-type and perovskite-related structures. LaMn1-xCuxO3 catalysts were prepd. by a freeze-drying method and showed uniform compns. The oxidn. states of Cu and Mn of the perovskite catalysts as well as several other properties relating to the reactivity of O, such as temp.-programmed desorption of O and CO, the reducibility of the catalysts, and the adsorption of CO and CO2 were measured. La1-ySryMnO3 (y = 0.2-1.0) catalysts were also studied for comparison. A remarkable synergistic effect on the catalytic activities for oxidn. was found with Mn and Cu. The synergistic effect and the deactivated process are discussed based on the above properties. The effect was attributed to the combination of 2 functions, the activation of O by Mn oxide and that of CO by Cu ions, and the deactivation towards adsorption of CO2.

=> d bib abs l34 2

L34 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2001 ACS
AN 1989:464855 HCAPLUS
DN 111:64855
TI Pronounced synergetic effect in the catalytic properties of LaMn1-xCuxCuxO3
AU Mizuno, Noritaka; Fujiwara, Yoshiko; Misono, Makoto
CS Fac. Eng., Univ. Tokyo, Tokyo, 113, Japan
SO J. Chem. Soc., Chem. Commun. (1989), (5), 316-18
CODEN: JCCCAT; ISSN: 0022-4936
DT Journal
LA English
AB A pronounced synergetic effect was found when LaMn1-xCuxO3 (x = 0.3-0.5) was prepd. by a freeze-drying method from metal acetates of each component. LaMn0.6Cu0.4O3 showed much higher catalytic activity for the reactions of CO-O2 and NO-CO in comparison with LaMnO3 and La2CuO4.

=> d bib abs l34 3

L34 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2001 ACS
AN 1977:127969 HCAPLUS
DN 86:127969
TI Preparation, structure, and selected catalytic properties of the lanthanum manganese copper oxide (LaMn1-xCuxO3-y) system
AU Gallagher, P. K.; Johnson, D. W., Jr.; Vogel, E. M.
CS Bell Lab., Murray Hill, N. J., USA
SO J. Am. Ceram. Soc. (1977), 60(1-2), 28-31
CODEN: JACTAW
DT Journal
LA English
AB Samples of LaMn1-xCuxO3-y in the range 0 .ltoreq. x .ltoreq. 0.8 were prepd. from freeze-dried solns. of the nitrates.
Samples with x .ltoreq. 0.6 were single-phase perovskites. At higher values of x, the samples contained La2CuO4 and CuO as well as the perovskite phase. Samples of LaMn1-xCuxO3-y supported on ceramic monoliths or when mixed with powd. Al2O3 exhibit catalytic activity for the oxidn. of CO. Greatest activity is shown for 0.4 .ltoreq. x .ltoreq. 0.7. Although the catalysts are severely poisoned by SO2, 2% H2O in the gas stream causes only slight deactivation. Activities of other oxide catalysts were also measured and compared. Rate consts. per unit surface area at 200-400.degree.C follow the order Co3O4 > Pt > LaMn1-xCuxO3-y (0.4 .gtoreq. x .gtoreq. 0.7) > Cu chromite > La1-xSrxMnO3 .gtoreq. other substituted LaMnO3 materials, CuO, or La2CuO4. The perovskite catalyst is more stable than Co3O4 or Cu chromite when heated in 10% H2 + 90% N2.

=> d bib abs l34 4

L34 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2001 ACS
AN 1976:185403 HCAPLUS
DN 84:185403
TI Preparation of high surface area substituted lanthanum manganate(III) catalysts
AU Johnson, David W., Jr.; Gallagher, Patrick K.; Schrey, Frank; Rhodes, Warren W.
CS Bell Lab., Murray Hill, N. J., USA
SO Am. Ceram. Soc., Bull. (1976), 55(5), 520-3, 527
CODEN: ACSBA7
DT Journal
LA English
AB Oxide perovskites contg. transition metals and rare earth ions are catalysts for oxidn. and redn. for treatment of automotive exhaust. LaMnO3-type perovskite catalysts were prepd. with A site substitutions of Sr, Pb, K, and Ce; and with B site substitutions of Ni, Co, Li, and Mg from nitrate solns. by freeze drying, spray drying, and pptn. The catalysts were studied by using CO oxidn. as the test reaction. Free drying in some cases gave a single-phase perovskite at a lower temp. than the other methods. Substitution of Sr or K in LaMnO3 gave catalysts with the highest conversion rates. Freeze dried La0.5Sn0.5MnO3 had the highest surface area. Ni substitution for Mn gave active catalysts.

=> d bib abs l34 5

L34 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2001 ACS
AN 1975:448858 HCAPLUS
DN 83:48858
TI Activity of lanthanum strontium manganese oxide (La0.7Sr0.3MnO3) without platinum and lanthanum lead manganese oxide (La0.7Pb0.3MnO3) with varying platinum contents for the catalytic oxidation of carbon monoxide
AU Gallagher, P. K.; Johnson, D. W., Jr.; Remeika, J. P.; Schrey, F.; Trimble, L. E.; Vogel, E. M.; Voorhoeve, R. J. H.
CS Bell Lab., Murray Hill, N. J., USA
SO Mater. Res. Bull. (1975), 10(6), 529-38
CODEN: MRBUAC
DT Journal
LA English
AB Catalytic activities of La0.7Pb0.3MnO3 and La0.7Sr0.3MnO3 for the oxidn. of CO were detd. for unsupported samples and for samples supported on corrugated monoliths of cordierite. Pt free La0.7Sr0.3MnO3 was produced with a high surface area. It is stable to .gtoreq.1000.degree. and has been used to prep. supported devices having overall activities comparable to com. Pt catalysts. In contrast, the activity of La0.7Pb0.3MnO3 is in most samples markedly reduced at .gtoreq.400.degree.. The effects of Pt on the activity for CO oxidn. were studied. Single crystals of La0.7Pb0.3MnO3 having 0-5200 ppm of Pt were grown. Polycryst. samples having 0-2200 ppm of Pt were prepd., mainly by freeze-drying techniques. Samples with .ltoreq.570 ppm Pt were not significantly more active than the freshly prepd. perovskite surfaces without Pt showing that the activity of the perovskite is not directly connected with Pt. Samples with .gtoreq.1600 ppm Pt showed markedly enhanced activity and a higher activation energy similar to that of Pt.

=> d bib abs l41 1

L41 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:719057 HCAPLUS
DN 133:365618
TI New sensor arrays and sampling systems for a modular electronic nose
AU Stetter, J. R.; Strathmann, S.; McEntegart, C.; Decastro, M.; Penrose, W. R.
CS Chemistry Department, Illinois Institute of Technology, Chicago, IL, 60616, USA
SO Sens. Actuators, B (2000), B69(3), 410-419
CODEN: SABCEB; ISSN: 0925-4005
PB Elsevier Science S.A.
DT Journal
LA English
AB The electronic nose (EN) is an instrumented chem. sensor array with pattern recognition. ENs with open architectures, such as the MOSES II system, can be readily modified to accommodate a wide range of samples, sensors, and methods. Three specific ways to make the EN more versatile and improve the anal. capability were developed, installed on the MOSES II system, and evaluated. First, the array of quartz crystal microbalance (QMB) and SnO2 heated metal oxide (MOX) sensors was expanded to include amperometric gas sensors (AGS). This expands the chem. independence of the sensor responses, increases the anal. chem. information produced by the array, and improves the capability for qual. and quant. anal. with the EN. Second, the authors have incorporated a membrane separator into the sampling system which improves anal. capability esp. on sensors that are sensitive to water vapor. Third, the authors have incorporated a heated noble metal filament into the inlet that thermally decomps. or reacts either gas, liq., or solid samples to generate gaseous mols. that are derivs. of the sample and may be more/less reactive on the sensors. The filament often produces improved sensitivity and selectivity for specific analytes. Examples are presented of identification of cheeses and explosives, and the detection of bacterial growth. The data illustrate how each of these instrument modifications and newly developed methods can improve the EN by adding either sensors with complementary information or methods of sample pretreatment that enhance anal. performance.
RE.CNT 40
RE
(2) Barsan, N; Analytical Chemistry 1999, V71(13), P2512 HCAPLUS
(3) Brodbelt, J; Analytical Chemistry 1987, V59(3), P454 HCAPLUS
(4) Buttner, W; Analytica Chimica Acta 1997, P63 HCAPLUS
(5) Chang, S; Talanta 1993, V40(4), P461 HCAPLUS
(6) Dickinson, T; Analytical Chemistry 1997, V69, P3413 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs l41 2

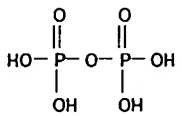
L41 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:361125 HCAPLUS
DN 131:63067
TI Simultaneous Determination of Hydrogen, Methane, and Carbon Monoxide in Water by Gas Chromatography with a Semiconductor Detector
AU Ohta, Keiichi; Terai, Hisayoshi; Kimura, Ikuhiko; Tanaka, Katsuyuki
CS Institute for Hydrospheric-Atmospheric Sciences, Nagoya University, Nagoya, 464-8601, Japan
SO Anal. Chem. (1999), 71(14), 2697-2699
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB A portable gas chromatograph with a semiconductor detector (GC/SCD) was constructed and used in the field for measurements of H2, CH4, and CO in water. These gases were sepd. from water by the headspace method in a 100-mL glass bottle with 80 or 90 mL of a water sample. A 1- or 2-mL portion of the headspace was injected into the GC/SCD after complete equilibration between the gaseous and aq. phases. Hydrogen, CH4, and CO were sepd. from each other through a column packed with mol. sieve 13X-S and detected by the SnO2 semiconductor sensor. Nitrogen and O2 were used as a carrier gas and an additive gas for the sensor, resp. Using std. gases in the field studies, the SCD exhibited a linearity at least up to 140 pmol with low detection limits of 1.4, 0.55, and 0.26 pmol for H2, CH4, and CO, resp. The good anal. results obtained for water samples at marine, lake, and wetland sites showed the GC/SCD to be an efficient anal. system for these reduced gases in natural waters.
RE.CNT 22
RE
(1) Bullister, J; J Geophys Res 1982, V87, P2022 HCAPLUS
(2) Butler, J; Geochim Cosmochim Acta 1987, V51, P697 HCAPLUS
(3) Conrad, R; Advances in Microbial Ecology 1988, V10, P231 HCAPLUS
(4) Conrad, R; J Geophys Res 1982, V87, P8839 HCAPLUS
(7) Jones, R; Deep-Sea Res 1991, V38, P625 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs l41 3

L41 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:160035 HCAPLUS
DN 114:160035
TI In vitro generation of carbon monoxide from organic molecules and synthetic metalloporphyrins mediated by light
AU Vreman, Hendrik J.; Gillman, Michael J.; Downum, Kelsey R.; Stevenson, David K.
CS Sch. Med., Stanford Univ., Stanford, CA, 94305, USA
SO Dev. Pharmacol. Ther. (1990), 15(2), 112-24
CODEN: DPTHDL; ISSN: 0379-8305
DT Journal
LA English
AB Sn protoporphyrin (SnPP) and analogs are being studied as possible agents for the prevention of neonatal hyperbilirubinemia through inhibition of heme oxygenase. Because SnPP is a photosensitizer, its role was studied in the photogeneration of CO from org. compds. in vitro. Generation of CO occurred in the presence of 5 .mu.M SnPP and cool while light (19 .mu.W/cm2/nm or 29 W/m2) from SnPP alone, human serum albumin, glucose, histidine, ethanolamine, medium-chain triglycerides, NADPH, and human plasma. More detailed studies with human serum albumin and NADPH established that the photogeneration of CO is nearly linear with time and irradiance. It is curvilinear with respect to the SnPP concn. at the concns. tested, and it is dependent on the presence of O2 in the reactor headspace. Cool white light generated less CO from human serum albumin and NADPH than equidistantly placed blue and green phototherapy light sources. Comparison of SnPP with other metalloporphyrin heme oxygenase inhibitors indicates that Sn mesoporphyrin is most and Zn protoporphyrin least photoreactive.

=> d bib abs hitstr l49 1

L49 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:277716 HCAPLUS
DN 131:2272
TI Modified pyrophosphate-99mTc kit for application in nuclear cardiology
AU Djokic, D.; Maksin, T.; Vucina, J.; Jankovic, D.
CS Laboratory Radioisotopes, Vinca Institute Nuclear Sciences, Belgrade, 11001, Yugoslavia
SO J. Radioanal. Nucl. Chem. (1998), 238(1-2), 155-157
CODEN: JRNCDM; ISSN: 0236-5731
PB Elsevier Science B.V.
DT Journal
LA English
AB A modified 99mTc(Sn)-pyrophosphate (PyP) kit for the application in nuclear cardiol. (radioventriculog., angiocardiog., scintigraphy of blood pool) was developed. Each vial contains 12 mg PyP (Na4P2O7), 4 mg SnCl2.cntdot.2H2O, 2.5 mg gentisic acid, and 10 mg NaCl. The reconstitution is performed by dissolving the lyophilized kit in 3 mL 0.9% NaCl. In comparison with the std. pyrophosphate kit for bone scanning and detection of myocardial infarction, it contains an increased amt. of Sn(II) so that the molar ratio ligand/reductant is lowered from 25 to 2.5. The radiochem. analyses showed that the radiochem. purity of the labeled kit is high (> 90%) during three hours after addn. of 99mTc-activity. The shelf-life of the inactive freeze-dried prepn. is .ltoreq.4 mo providing that it is kept in vacuum and at appropriate temp. (2-8.degree.). The biodistribution studies revealed increased accumulation in blood and low uptake by liver and kidneys. It was concluded that the modified kit performs stable and reproducible properties.
IT 54627-10-0
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modified pyrophosphate-99mTc kit for application in nuclear cardiol.)
RN 54627-10-0 HCAPLUS
CN Diphosphoric acid, technetium-99Tc tin salt (9CI) (CA INDEX NAME)



● x Sn(x)

● x ^{99}Tc(x)

RE.CNT 6
RE
(1) Cvoric, J; J Radioanal Chem 1978, V44, P265 HCAPLUS
(2) Djokic, D; Ann Meeting of Yug Nucl Med Soc 1995
(3) Jones, A; Radiochim Acta 1995, V70/71, P289 HCAPLUS
(4) Jovanovic, V; Eur J Nucl Med 1983, V8, P179 HCAPLUS
(6) Subramanian, G; J Nucl Med 1975, V16, P744 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l49 2

L49 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1994:636880 HCAPLUS
DN 121:236880
TI Microwave dielectric ceramic compositions and their manufacture
IN Yokoyama, Yoshiaki; Ozeki, Hirobumi
PA Ngk Spark Plug Co, Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

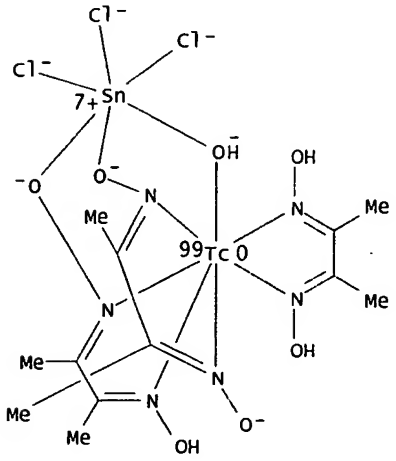
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06215626	A2	19940805	JP 1993-23715	19930118

AB The compns. consist of 100 wt. parts of (Zr1-xSnx)TiO4 (0.1 .ltoreq.x .ltoreq.0.3), and 0.1-1.0 wt. parts of MnO2. The compns. are manufd. by: mixing MnO2, ZrO2, SnO2, and TiO2 with an appropriate compn., firing at 900-1100.degree.in atm., adding a desired org. binder and water, pulverizing, freeze-drying, granulating, molding, and firing at 1350-1425.degree.. The compns. have high sp. dielec. const., and are suitable for dielec. resonator, etc.
IT 150902-94-6, Manganese tin titanium zirconium oxide
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(microwave dielec. ceramic compns. with high sp. dielec. const. and their manuf.)
RN 150902-94-6 HCAPLUS
CN Manganese tin titanium zirconium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Zr	x	7440-67-7
Ti	x	7440-32-6
Sn	x	7440-31-5
Mn	x	7439-96-5

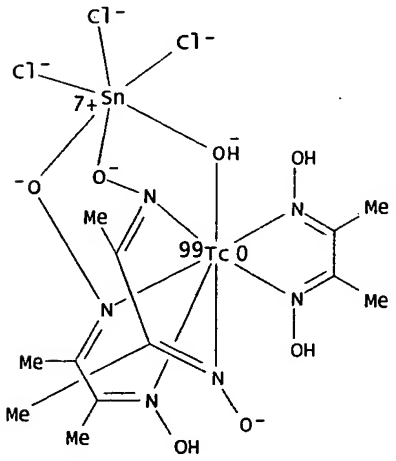
=> d bib abs hitstr l49 3

L49 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:627237 HCAPLUS
DN 115:227237
TI Technetium-labeling of monoclonal antibodies with functionalized BATOs: 2. TcCl(DMG)3CPITC (CPITC=carboxyphenylisothiocyanate) labeling of B72.3 and NP-4 whole antibodies and NP-4 F(ab')2
AU Linder, K. E.; Wen, M. D.; Nowotnik, D. P.; Ramalingam, K.; Sharkey, R. M.; Yost, F.; Narra, R. K.; Nunn, A. D.; Eckelman, W. C.
CS Bristol-Myers Squibb Pharm. Res. Inst., New Brunswick, NJ, 08903, USA
SO Bioconjugate Chem. (1991), 2(6), 407-14
CODEN: BCCHES; ISSN: 1043-1802
DT Journal
LA English
AB BATO (boronic acid adduct of technetium dioximes) complexes, TcCl(dioxime)3Br, were prepd. in which the boron substituent (R) was the protein-reactive 2-carboxy-4-Ph isothiocyanate (CPITC). The 99Tc complexes, where the dioxime was either dimethylglyoxime (DMG) or cyclohexanedione dioxime (CDO), were prepd. and characterized. The 99mTc complex TcCl(DMG)3CPITC was prepd. from a freeze-dried kit and used to label B72.3 (anti-TAG.72) and NP-4 (anti-CEA) whole antibodies, and the NP-4 F(ab')2 fragment. SDS-PAGE electrophoresis indicated that the labeling reagent was strongly bound to antibody. The labeled antibodies displayed high binding to affinity columns and good tumor uptake in GW39 tumor-bearing mice.
IT 127686-39-9
RL: RCT (Reactant)
(reaction of, with boronic acid hydroxy carboxyphenylisothiocyanate)
RN 127686-39-9 HCAPLUS
CN Technetium-99Tc, [.mu.-[(2,3-butanedione dioximato)(1-)-N,N':O]][.mu.-[(2,3-butanedione dioximato)(2-)-N,N':O]](2,3-butanedione dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX NAME)

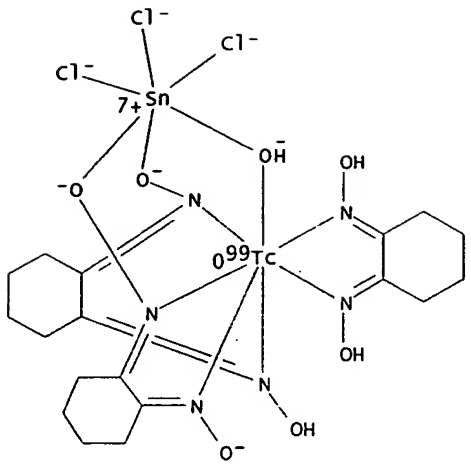


=> d bib abs hitstr 149 4

L49 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:509420 HCAPLUS
DN 115:109420
TI Technetium labeling of monoclonal antibodies with functionalized BATOs. 1. TcCl(DMG)3PITC [phenyl isothiocyanate].
AU Linder, K. E.; Wen, M. D.; Nowotnik, D. P.; Malley, M. F.; Gougoutas, J. Z.; Nunn, A. D.; Eckelman, W. C.
CS Bristol-Myers Squibb Pharm. Res. Inst., New Brunswick, NJ, 08903, USA
SO Bioconjugate Chem. (1991), 2(3), 160-70
CODEN: BCCHES; ISSN: 1043-1802
DT Journal
LA English
AB BATO (boronic acid adduct of technetium dioximes) complexes, TcCl(dioxime)3BR, were prepd. in which the boron substituent (R) was the protein-reactive m-Ph isothiocyanate (PITC). The 99TcCl(dioxime)3PITC complexes [dioxime = dimethylglyoxime (DMG) or cyclohexanedione dioxime (CDO)] were prepd. from 99Tc(dioxime)3(.mu.-OH)SnCl3 and characterized. The x-ray crystal structure of 99mTcO4- in a process using a freeze-dried kit, either in a 1-step procedure or via 99mTcCl(dioxime)3. Initial labeling studies with 99mTcCl(dioxime)3PITC were performed on glycine and polylysine and, subsequently, on mouse IgG and the B72.3 monoclonal antibody. Covalent attachment of 99mTcCl(DMG)3PITC to B72.3 was demonstrated by SDS-PAGE electrophoresis. B72.3 labeled with 99mTcCl(DMG)3PITC displayed high binding to a TAG 72 affinity column and had a distribution in normal mice similar to that reported for I-labeled B72.3.
IT 127686-39-9 127686-40-2
RL: BIOL (Biological study)
(reaction of metastable, with isothiocyanatophenylboronic acid)
RN 127686-39-9 HCAPLUS
CN Technetium-99Tc, [.mu.-[(2,3-butanedione dioximato)(1-)-N,N':O]][.mu.-[(2,3-butanedione dioximato)(2-)-N,N':O]](2,3-butanedione dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX NAME)



RN 127686-40-2 HCAPLUS
CN Technetium-99Tc, [.mu.-[(1,2-cyclohexanedione dioximato)(1-)-N,N':O]][.mu.-[(1,2-cyclohexanedione dioximato)(2-)-N,N':O]](1,2-cyclohexanedione dioxime-N,N')-.mu.-hydroxy(trichlorotin)-, stereoisomer (9CI) (CA INDEX NAME)


Cl⁻
Cl⁻
Cl⁻
7+ Sn
OH⁻
⁻O
O⁻
N
OH
N
^{99}Tc
N
N
OH
N
N
OH
O⁻

=> d bib abs hitstr

L59 ANSWER 1 OF 1 USPATFULL
AN 95:94697 USPATFULL
TI Biochemically active agents for chemical catalysis and cell receptor activation
IN Kossovsky, Nir, Los Angeles, CA, United States
Sponsler, Edward, Burbank, CA, United States
Gelman, Andrew, Los Angeles, CA, United States
Rajguru, Samir, Los Angeles, CA, United States
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
PI US 5460830 19951024
AI US 1993-145870 19931101 (8)
DCD 20100112
RLI Continuation-in-part of Ser. No. US 1993-199, filed on 4 Jan 1993, now patented, Pat. No. US 5334394 which is a continuation-in-part of Ser. No. US 1991-690601, filed on 24 Apr 1991, now patented, Pat. No. US 5178882 which is a continuation-in-part of Ser. No. US 1990-542255, filed on 22 Jun 1990, now patented, Pat. No. US 5219577
DT Utility
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Spear, James M.
LREP Poms, Smith, Lande & Rose
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1399
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A biologically active composition made up of core particles or surfaces which are coated with a layer which is designed to allow attachment of biochemically reactive pairs (BRP's) without denaturing the BRP to the microparticles. BRP's which may be attached include ligand-receptor pairs, enzyme-substrate pairs, drug-receptor pairs, catalyst-reactant pairs, toxin-ligand pairs, absorbant-absorbate pairs and adsorbant-adsorbate pairs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 630-08-0, Carbon monoxide, biological studies
(Hb pair; biochem. active agents for chem. catalysis and cell receptor activation)
RN 630-08-0 USPATFULL
CN Carbon monoxide (8CI, 9CI) (CA INDEX NAME)

$^{-}C{\equiv}O^{+}$

=> d kwic

L59 ANSWER 1 OF 1 USPATFULL
SUMM . . . A5 (4), Jul/Aug. 1987, pgs. 1375-1384; Hayashi, C., Physics Today, Dec. 1987, pgs. 44-60; MRS Bulletin, Jan 1990, pgs. 16-47).
Tin oxide having a dispersed (in H.sub.2 O) aggregate particle size of about 140 nanometers is available commercially from Vacuum Metallurgical. . .
SUMM 3. lyophilization of the aqueous solvent/dispersant from the surface of the solid;
SUMM Lyophilization, as used in Step 3 above, means the removal of the aqueous phase from the surface film by a reduction. . . and the removal of heat to cool the solid and the newly forming surface film may be modifications of the lyophilization process.
SUMM . . . the removal of the aqueous phase from the surface film by (a) a reduction in the ambient gas partial pressure (lyophilization) or (b) dialysis/ultrafiltration. Both the application of heat and the removal of heat to cool the solid and the newly forming surface film may be modifications of the lyophilization process.
SUMM . . . any of the conventional methods typically used for storing antigenic compounds or antibodies. For example, the coated particles may be freeze dried or stored as a suspension in a compatible solution. When used as a vaccine, the particles coated with a viral. . .
DETD Example 1. Preparation of nanocrystalline tin oxide microparticles: 1.5 to 2.0 mg of ultrafine (nanocrystalline) metal

powder was placed in a 1.7 ml screw-cap microcentrifuge with. . . The ddH.sub.2 O was filtered through a rinsed 0.45 micron filter-sterilizing unit or acrodisc (Gelman Scientific). The metal powder was tin oxide with a mean diameter (by photon correlation spectroscopy) of 140 nm. The mixture was vortexed for 30 seconds and. . .

DETD The coating was applied to the tin oxide particles by suspending the particles in a stock solution of cellobiose. The cellobiose stock solution was a 292 mM. . .

DETD Sufficient cellobiose stock solution was added to 150 microliters of ultrafine tin oxide dispersion so that the final concentration of the tin oxide was 1.00 percent (w/v) or 29.2 mM. A typical volume for preparation was 2.0 mls which was mixed four. . . the mobility of the particles (coated and uncoated) on a Coulter DELSA 440 doppler energy light scatter analyzer. The coated tin oxide particles exhibited a relatively low mobility compared to the non-coated tin oxide particles. Measurements were also taken at various dilute salt concentrations to ensure that the observations with respect to mobility. . .

DETD . . . The same procedure was carried out in accordance with Example 1, except that ruthenium oxide microparticles were substituted for the tin oxide particles. The ruthenium oxide particles were obtained from Vacuum Metallurgical Company (Japan).

DETD Example 3. Preparation of the nanocrystalline silicon dioxide and tin oxide particles: Nanocrystalline silicon dioxide was acquired commercially from Advanced Refractory Technologies, Inc. (Buffalo, N.Y.) and tin oxide was acquired commercially from Vacuum Metallurgical Co. (Japan). The tin oxide particles were also prepared by reactive evaporations of tin in an argon-oxygen mixture and collected on cooled substrates. Nanocrystalline tin oxide was also synthesized by D.C. reactive Magnetron sputtering (inverted cathode). A 3" diameter target of high purity tin was sputtered in a high pressure gas mixture of argon and oxygen. The ultrafine particles formed in the gas phase. . . Scotch tape. CuK.alpha. radiation was used on a Norelco diffractometer. The spectrum obtained was compared with ASTM standard data of tin oxide. (Powder Diffraction File, Card #21-1250. Joint Committee on Power Diffraction Standards, American Society for Testing and Materials, Philadelphia 1976.). . .

DETD . . . was established by the removal of 500 ul of the treated dispersion by N4MD analysis. The mean dispersion diameter was re -established at this step. The stability of the coated dispersion was determined by sequential measurements over a 24-hour period. The stability. . .

DETD Example 4. Preparation, isolation and surface adsorption of human serum transferrin proteins: Nanocrystalline tin oxide was synthesized by D.C. reactive Magnetron sputtering (inverted cathode). A 3" diameter target of high purity tin was sputtered in a high pressure gas mixture of argon and oxygen. The ultra-fine particles formed in the gas phase. . . Scotch tape. CuK(alpha) radiation was used on a Norelco diffractometer. The spectrum obtained was compared with ASTM standard data of tin oxide. The specimens for transmission electron microscopy and selected area diffraction were collected on a standard 3 mm diameter carbon. . .

DETD . . . was added to 1.0 ml of a 29.2 mM cellobiose-phosphate buffered saline solution in a dust free screw top glass vial and sonicated for 20 minutes at 22.5.degree.-35.degree. C. The submicron fraction was then isolated by pelleting macroparticulates by microcentrifugation at. . .

DETD Transmission electron micrographs showed that the D.C. magnetron sputtered tin oxide was composed of individual particles measuring 20-25 nm in diameter which aggregated into clusters measuring 80 to 120 nm. . . in diameter. By photon correlation spectroscopy, these same particles when dispersed in distilled water produced agglomerates measuring 154.+-.55 nm. The tin oxide particles were fully crystalline as characterized by electron and x-ray diffraction. Energy dispersive x-ray spectroscopy showed no other elements. . .

DETD By Doppler electrophoretic light scatter analysis, tin oxide exhibited a mean mobility of 2.177.+-.0.215 .mu.m-cm/V-s in aqueous solutions ranging from 10.8 to 20.3 .mu.M NaCl. Following cellobiose surface coating in a 1% solution, tin oxide exhibited a mean mobility of 1.544.+-.0.241 .mu.m-cm/V-s in aqueous solutions ranging from 0.0 to 21.0 .mu.M NaCl. The oxide. . .

DETD Following transferring binding, the crude tin oxide/cellobiose/protein conjugates measured 350.+-.84 nm by photon correlation spectroscopy and transmission electron microscopy. Vacuum dried dropped samples with low concentration. . .

DETD Example 5. Preparation and Characterization of Epstein-Barr Virus Decoys: Nanocrystalline tin oxide particles were synthesized by D.C. reactive Magnetron sputtering as previously described in Example 1.

DETD Aliquots of the tin oxide powder weighing approximately 1.5 mg were initially suspended in 3.0 ml of 29.2 mM cellobiose solution in a dust free glass vial by liberal vortexing [Vortex Genie, Scientific Industries, Bohemia, N.Y.]. The resultant brownish cloudy suspension was then sonified at 175 W. . .

DETD . . . EBV extract was quickly added to a MD nominal molecular weight stir cell with 2.0 ml of the surface treated tin oxide dispersion prewarmed to 37.5.degree. C. The mixture was then slowly stirred while being incubated at 37.5.degree. C. for 2.0. . .

DETD . . . pH's ranging between 4.59 and 9.06 and corresponding conductivities ranging between 2.290 and 4.720 mS/cm were prepared. Aliquots of raw tin oxide, surface modified cellobiose covered tin oxide, synthesized EBV decoy, and whole EBV were dialyzed against each of the nine solutions and the mobilities of the. . .

DETD . . . labeled reaction products by transmission electron microscopy. The relative intensity of antibody binding was determined by counting the number of tin oxide based particles observed to have bound gold spheres (% positive) and then noting the number of gold spheres bound. . .

DETD The ultrafine tin oxide particles measured 20-25 nm in diameter and formed aggregates measuring 80 to 120 nm in diameter by transmission electron microscopy. By photon correlation spectroscopy, these same particles when dispersed in distilled water produced agglomerates measuring 154.+-.55 nm. The tin oxide particles were fully crystalline as characterized by electron and x-ray diffraction. Energy dispersive x-ray spectroscopy showed no other elements. . .

DETD . . . the decoy and native EB virus retained virtually identical mobilities of approximately -1.4 .mu.m-cm/V-s throughout the pH range. Second, untreated tin oxide exhibited a mobility of approximately -1.0 .mu.m-cm/V-s at a pH of 4.5 which then rose rapidly to -3.0 .mu.m-cm/V-s at pH values of 5.0 and higher. Third, surface modified tin oxide treated with cellobiose retained a mobility of approximately -1.5 .mu.m-cm/V-s until it increased rapidly to -2.5 um-cm/V-s at a. . .

DETD . . . 5) synthesized from a starting aliquot of 32 .mu.g of gp350 per injection. The last group received cellobiose coated in tin oxide dispersed in phosphate reaction buffer. Injections were free of adjuvant. Whole blood was removed using aseptic techniques via cardiac. . .

DETD . . . the adsorbed antigen and by subtracting the baseline values recorded from the wells containing serum from the rabbits stimulated with tin oxide only.

DETD Serum collected from the 4 rabbits sensitized with tin oxide showed no increased anti-EBV activity over pre-immune serum at any of the three two week sampling intervals. The remaining. . .

DETD . . . carbohydrates, carbohydrate derivatives, and other macromolecules with carbohydrate-like components characterized by the abundance of --OH (hydroxyl) side groups; methods for lyophilization to yield molecular stabilizing surface films; and methods for immobilizing (a) member(s) of a BRP are described in the additional. . .

DETD 15. Take a concentration measurement by removing 1.0 ml of the preparation from the cell and lyophilizing it down in a pre-weighed 1.7 ml Eppendorf tube. After lyophilization, take a mass measurement of the tube with its contents and subtract it away from the mass of the empty. . .

DETD Incubation/Lyophilization.

DETD 3. The next day portion out the mixture into appropriately sized vessels for overnight lyophilization.

DETD 7. Take a concentration measurement by removing 1 ml of the suspension dehydrating it in a lyophilizer in a pre-weighed 1.7 ml Eppendorf tube, and massing.

DETD . . . previously prepared 4 brushite tubes. Vortex each tube a few seconds to make certain that the contents are well dispersed. Lyophilize overnight [approx. 16 hrs] at the low drying rate setting. The next morning resuspend in 50 ml aliquots of sterile. . .

DETD . . . ml of 100 mM citrate to each of the 15 ml conicals and nutate for 30 minutes at room temperature. Lyophilize overnight [approx. 16 hrs] at the low drying rate setting. The next morning resuspend in 50 ml aliquots of sterile. . .

DETD 1) Ly philization: Two of the core preparations are lyophilized overnight on a Savant Speed Vac (SVC100) under the

low drying rate setting for approximately 16 hours. The next morning the lyophilate is resuspended to 10 ml with HPLC grade sterile water. Three washes with water are performed by pelleting and resuspension.. . .

DETD After insulin lyophilization, bring each of the preparations up to 10.0 ml with a water dispersion of 10% phosphatidyl choline, 10% phosphatidyl serine,. . .

DETD . . . cellobiose was adsorbed onto the clean surface of the crystal by evenly applying 400 ul of 100 mM cellobiose and lyophilizing for ten minutes without applied heat or rotation (Savant SVC 100 lyophilizer, Wesbury, N.Y.). 100 ul of the 4% BSA solution was then added onto the cellobiose coating. Excess protein solution was. .

IT 630-08-0, Carbon monoxide, biological studies
(Hb pair; biochem. active agents for chem. catalysis and cell receptor activation)

=> d bib abs hitstr l63 3

L63 ANSWER 3 OF 6 USPATFULL

AN 1999:27770 USPATFULL
TI Heterocyclic compounds for the treatment of CNS and cardiovascular disorders
IN TenBrink, Ruth E., Richland, MI, United States
Ennis, Michael D., Portage, MI, United States
Lahti, Robert A., Columbia, MD, United States
PA Pharmacia & Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)
PI US 5877317 19990302
WO 9518118 19950706
AI US 1996-663094 19960624 (8)
WO 1994-US13284 19941130
19960724 PCT 371 date
19960724 PCT 102(e) date
RLI Continuation of Ser. No. US 1994-279974, filed on 25 Jul 1994, now abandoned which is a continuation-in-part of Ser. No. US 1993-175218, filed on 28 Dec 1993, now abandoned
DT Utility
EXNAM Primary Examiner: Bernhardt, Emily
LREP Stein, Bruce
CLMN Number of Claims: 22
ECL Exemplary Claim: 1,21,22
DRWN No Drawings
LN.CNT 4865
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel aromatic bicyclic amines of formula (I) ##STR1## are useful in treating central nervous system disorders and cardiac arrhythmias and cardiac fibrillation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic l63 3

L63 ANSWER 3 OF 6 USPATFULL
SUMM . . . acetal (Aldrich) or bromoacetaldehyde diethyl acetal (Aldrich) in the presence of a Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride and boron trifluoride-etherate in solvents such as dichloromethane and nitromethane (together or separately) to give the non-cyclized halide (LXIII).. . .
SUMM . . . chloroacetone (Aldrich) or 4-chloro-2-butanone (Pfaltz and Bauer) in the presence of a Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride or boron trifluoride-etherate in solvents such as dichloromethane and nitromethane (together or separately) to give the non-cyclized R.sub.1-1 halide. . .
SUMM . . . alcohols (XLIII, XLIV, XLV, XLIX, LI and LIII) in the presence of Lewis acids such as titanium tetrachloride, methanesulfonic acid, tin tetrachloride or boron trifluoride etherate in solvents such as dichloromethane or nitromethane or mixtures thereof to give the R.sub.10 -bicyclic. . .
DETD . . . 127, 103 mg, 0.25 mmol), palladium acetate (98%, 2.9 mg, 0.012 mmol) and 1,3-bis-diphenylphosphinopropane (97%, 6.4 mg, 0.015 mmol). Carbon monoxide atmosphere is established in the vial . To the reaction vessel is introduced via syringe DMF (0.62 ml), 1,1,1,3,3,3-hexamethyldisilazane (98%, 0.38 ml, 1.8 mmol), and diisopropylethylamine (0.087. . .

=> d bib abs hitstr l40 1

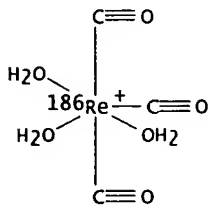
L40 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:719299 HCAPLUS
DN 130:1842
TI Method for the preparation of facial metal tricarbonyl compounds and their use in the labeling of biologically active substrates
IN Alberto, Roger; Schibli, Roger; Egli, Andre
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9848848	A1	19981105	WO 1998-US7979	19980421
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 879606	A1	19981125	EP 1997-201232	19970425
	R: CH, LI, NL				
	AU 9871413	A1	19981124	AU 1998-71413	19980421
	BR 9809409	A	20000613	BR 1998-9409	19980421
	EP 1019095	A1	20000719	EP 1998-918501	19980421
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	NO 9905160	A	19991213	NO 1999-5160	19991022
PRAI	EP 1997-201232		19970425		
	WO 1998-US7979		19980421		

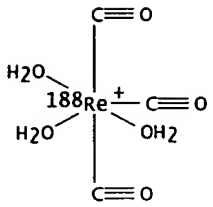
AB A method is disclosed for prepg. fac-[M(CO)3(OH2)3]+ (M = Mn, 99mTc, 186Re, 188Re) (I) by reacting a metal in the permetallate form with carbon monoxide and a reducing agent, characterized in that a mixt. of a base, a reducing agent sol. in water but not substantially decompd. by water, and optionally a stabilizing agent, is solved in a water-contg. solvent system contg. a soln. of the metal in the permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide and optionally in the presence of a halide. Also disclosed are to a method of prepg. a labeled compd. with the aid of the compd. I, a method of direct prepn. of labeled compds., a method of labeling of substrates (e.g. amino acids, peptides, proteins, sugars, small receptor binding mols. and body cells) with the aid of compd. I, a kit for the prepn. of a labeling compn., and a kit for the prepn. of a diagnostic of therapeutic pharmaceutical compn.

IT 215669-75-3P 215669-78-6P
RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(facial metal tricarbonyl compd. prepn. and use in labeling of biol. active substrates for diagnosis and therapy)

RN 215669-75-3 HCAPLUS
CN Rhenium(1+)-186Re, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



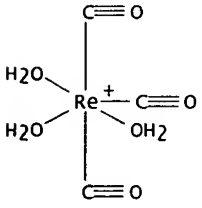
RN 215669-78-6 HCAPLUS
CN Rhenium(1+)-188Re, triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



RE.CNT 8
RE
(1) Bamford, C; J CHEM SOC DALTON TRANS 1978, 1, P4 HCAPLUS
(2) Beck, W; J ORGANOMET CHEM 1980, V191(1), P73 HCAPLUS
(3) Centre Nat Rech Scient; EP 0105785 A 1984 HCAPLUS
(4) Egli, A; Hydrolysis of the Organometallic Aqua Ion fac-Triaquatricarbonylrhenium(I) Mechanism, pKa, and Formation Constants of the Polynuclear Hydrolysis Products 1997, 18, HCAPLUS
(5) Egli, A; ORGANOMETALLICS 1997, V16(9), P1833 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l40 2

L40 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:129891 HCAPLUS
DN 122:22508
TI Synthesis and reactivity of [NEt4]2[ReBr3(CO)3]. Formation and structural characterization of the clusters [NEt4][Re3(.mu.3-OH)(.mu.-OH)3(CO)9] and [NEt4][Re2(.mu.-OH)3(CO)6] by alkaline treatment
AU Alberto, Roger; Egli, Andre; Abram, Ulrich; Hegetschweiler, Kaspar; Gramlich, Volker; Schubiger, P. August
CS Div. Radiopharm., Paul Scherrer Inst., Villigen, CH-5232, Switz.
SO J. Chem. Soc., Dalton Trans. (1994), (19), 2815-20
CODEN: JCDTBI; ISSN: 0300-9246
DT Journal
LA English
AB The dianionic Re(I) complex [ReBr3(CO)3]2- was synthesized and characterized. This complex is an important starting material for compds. contg. the fac-Re(CO)3 moiety since the three bromide ligands are very weakly bound. Particularly in coordinating solvents, the bromides are substituted by solvent mols. thus generating the strong 12e- Lewis acid [Re(H2O)3(CO)3]+ (2). This formula was confirmed, particularly in H2O, by IR spectroscopic methods. 2 Is stable in aq. soln. even when exposed to air for weeks. It was titrated by NaOH solns. The change in pH was detected potentiometrically and found to occur very slowly, indicating a reaction other than protonation/deprotonation. Depending on the rate of titrn. and the total concn. of OH-, the two Re(I) hydroxo complexes [NEt4][Re3(.mu.3-OH)(.mu.-OH)3(CO)9] and [NEt4][Re2(.mu.-OH)3(CO)6] were isolated in good yield and structurally characterized. The former crystallizes in the orthorhombic space group Pnma with a 10.752(7), b 13.783(8) and c 18.254(12) .ANG.. The skeletal framework is that of a cube lacking the Re(CO)3 unit in one corner. The latter crystallizes in the orthorhombic space group P2mm with Z = 1, a 6.551(2), b 7.413(2) and c 12.084(2) .ANG.. The two Re(CO)3 moieties are bridged by three OH- ligands which create a mirror plane. A 2nd mirror plane is perpendicular to it along the Re-Re axis.
IT 159542-56-0P, fac-Triaquatricarbonylrhenium(1+)
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(formation and reaction with hydroxide)
RN 159542-56-0 HCAPLUS
CN Rhenium(1+), triaquatricarbonyl-, (OC-6-22)- (9CI) (CA INDEX NAME)



=> d bib abs hitstr l26 9

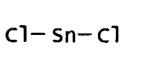
L26 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN 1991:254002 HCAPLUS
DN 114:254002
TI Preparation of rhenium phosphonate therapeutic agents
IN Pipes, David W.
PA Mallinckrodt, Inc., USA
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9013530	A1	19901115	WO 1990-US1323	19900312
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	US 5021235	A	19910604	US 1989-346411	19890502
	CA 2064063	AA	19901103	CA 1990-2064063	19900312
	AU 9053554	A1	19901129	AU 1990-53554	19900312
	AU 646801	B2	19940310		
	EP 470965	A1	19920219	EP 1990-905853	19900312
	EP 470965	B1	19950628		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 05500042	T2	19930114	JP 1990-505467	19900312
	JP 3080984	B2	20000828		
	ES 2076363	T3	19951101	ES 1990-905853	19900312
	US 5192526	A	19930309	US 1991-673000	19910321
PRAI	US 1989-346411		19890502		
	WO 1990-US1323		19900312		

AB A stabilized radiopharmaceutical ready for use in diagnostic or therapeutic applications is prepd. for patients with cancer, heart diseases, etc. The preparatory method comprises (1) prepn. of 5 .times. 10-6 - 2 .times. 10-3M radioactive perrhenate soln., and (2) reducing and complexing the perrhenate with a ligand (0.01-0.15 M) which complexes with the perrhenate, and also with a reductant (0.005-0.02 M), wherein the pH of the resultant soln. is 1.5-5.5. Thus, 186Re-1-hydroxyethylidene diphosphonate (HEDP) with .ltoreq.1% ReO4- was prepd. using Na2H2HEDP (a ligand), SnCl2.2H2O (a reductant), gentistic acid (an antioxidant), saline, ReO4- in EtOH, and 186Re.

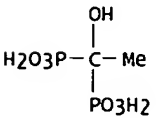
IT 7772-99-8, Stannous chloride, uses and miscellaneous
RL: BIOL (Biological study)
(as reductant, in pharmaceutical prepn. contg. radioactive perrhenate)

RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

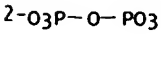


IT 2809-21-4 14000-31-8, Pyrophosphate 14378-26-8
, uses and miscellaneous 14998-63-1, uses and miscellaneous
15477-76-6, Phosphonate 112319-85-4, Imidodiphosphate
RL: BIOL (Biological study)
(radioactive pharmaceuticals manuf. from)

RN 2809-21-4 HCAPLUS
CN Phosphonic acid, (1-hydroxyethylidene)bis- (9CI) (CA INDEX NAME)



RN 14000-31-8 HCAPLUS
CN Diphosphate (9CI) (CA INDEX NAME)



RN 14378-26-8 HCAPLUS
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)

^{188}Re

RN 14998-63-1 HCAPLUS
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)

^{186}Re

RN 15477-76-6 HCAPLUS
CN Phosphonic acid, ion(2-) (8CI, 9CI) (CA INDEX NAME)

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 112319-85-4 HCAPLUS
CN Imidodiphosphate (9CI) (CA INDEX NAME)

$^{2-}O_3P-NH-PO_3^{2-}$

=> d bib abs hitstr l31 12

L31 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:249229 HCAPLUS
DN 128:299514
TI Formulation of 99mTc-Sn-EDTMP freeze-dried kit for bone scanning
AU Mushtaq, A.
CS Radioisotope Production Group, Nuclear Chem. Div., Pakistan Inst. Nuclear Sci. Technol., Islamabad, Pak.
SO Nucl. Med. Biol. (1998), 25(3), 313-315
CODEN: NMBIEO; ISSN: 0969-8051
PB Elsevier Science Inc.
DT Journal
LA English
AB The labeling of EDTMP with 99mTc was investigated. Stannous chloride was used as the reducing agent for the redn. of 99mTc. Dependence of the yield of 99mTc-EDTMP upon the concn. of reducing agent and ligand, reaction time and pH were examd. Under optimum conditions, the yields of 99mTc-EDTMP were >99%. The stability of 99mTc-Sn-EDTMP was also studied.
IT 7772-99-8, Stannous chloride, reactions
RL: RCT (Reactant)
(formulation of 99mTc-Sn-EDTMP freeze-dried kit for bone scanning)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl-Sn-Cl

=> d bib abs hitstr l31 9

L31 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:277716 HCAPLUS
DN 131:2272
TI Modified pyrophosphate-99mTc kit for application in nuclear cardiology
AU Djokic, D.; Maksin, T.; Vucina, J.; Jankovic, D.
CS Laboratory Radioisotopes, Vinca Institute Nuclear Sciences, Belgrade, 11001, Yugoslavia
SO J. Radioanal. Nucl. Chem. (1998), 238(1-2), 155-157
CODEN: JRNCDM; ISSN: 0236-5731
PB Elsevier Science B.V.
DT Journal
LA English
AB A modified 99mTc(Sn)-pyrophosphate (PyP) kit for the application in nuclear cardiol. (radioventriculog., angiocardiog., scintigraphy of blood pool) was developed. Each vial contains 12 mg PyP ($Na_4P_2O_7$), 4 mg $SnCl_2$.cntdot.$2H_2O$, 2.5 mg gentisic acid, and 10 mg NaCl. The reconstitution is performed by dissolving the lyophilized kit in 3 mL 0.9% NaCl. In comparison with the std. pyrophosphate kit for bone scanning and detection of myocardial infarction, it contains an increased amt. of Sn(II) so that the molar ratio ligand/reductant is lowered from 25 to 2.5. The radiochem. analyses showed that the radiochem. purity of the labeled kit is high (> 90%) during three hours after addn. of 99mTc-activity. The shelf-life of the inactive freeze-dried prepn. is .ltoreq.4 mo providing that it is kept in vacuum and at appropriate temp. (2-8.degree.). The biodistribution studies revealed increased accumulation in blood and low uptake by liver and kidneys. It was concluded that the modified kit performs stable and reproducible properties.
IT 10025-69-1, Stannous chloride dihydrate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modified pyrophosphate-99mTc kit for application in nuclear cardiol.)
RN 10025-69-1 HCAPLUS
CN Tin chloride ($SnCl_2$), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

●2 H_2O

RE.CNT 6
RE
(1) Cvoric, J; J Radioanal Chem 1978, V44, P265 HCAPLUS
(2) Djokic, D; Ann Meeting of Yug Nucl Med Soc 1995
(3) Jones, A; Radiochim Acta 1995, V70/71, P289 HCAPLUS
(4) Jovanovic, V; Eur J Nucl Med 1983, V8, P179 HCAPLUS
(6) Subramanian, G; J Nucl Med 1975, V16, P744 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l31 8

L31 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:371230 HCAPLUS
DN 131:174922
TI An improved kit formulation of a dopamine transporter imaging agent: [Tc-99m]TRODAT-1
AU Choi, S. R.; Kung, M.-P.; Plossl, K.; Meegalla, S.; Kung, H. F.
CS Departments of Radiology, University of Pennsylvania, Philadelphia, PA, 19104, USA
SO Nucl. Med. Biol. (1999), 26(4), 461-466
CODEN: NMBIEO; ISSN: 0969-8051
PB Elsevier Science Inc.
DT Journal
LA English
AB Recently, [Tc-99m]TRODAT-1, the first Tc-99m-labeled tracer for imaging CNS dopamine transporters in humans, was reported. This tracer displayed excellent specific binding to dopamine transporters in the basal ganglia region of the brain, thus it is potentially useful for the diagnosis of deficit of dopamine transporters in neurodegenerative diseases, such as Parkinson's disease. Prepn. of [Tc-99m]TRODAT-1 was previously achieved by a multistep kit formulation. It is highly desirable to further improve the prepn. by developing a simplified one-vial formulation with a reduced amt. of TRODAT-1 ligand for routine clin. use. To achieve this goal, a series of studies to optimize labeling efficiency by varying a combination of factors (amt. of free ligand, reaction reagents, and reaction pH) was carried out. [Tc-99m]TRODAT-1 prepd. by this new kit formulation was evaluated by assessing the brain uptake and target (striatum) vs. nontarget (cerebellum) ratios in rats. Appropriate amts. of various ingredients for a one-vial kit formulation providing .gtoreq.90% radiolabeling yields were identified. The most consistent and reliable formulation contained 10 .mu.g of TRODAT-1 (a redn. of free ligand from 200 .mu.g to 10 .mu.g), 32 .mu.g of SnCl2, 10 mg of sodium glucoheptonate, and 840 .mu.g of disodium EDTA in one vial as a lyophilized kit. It is feasible to reconstitute the vial with [Tc-99m]pertechnetate (0.5-2 mL, .ltoreq.1110 MBq, 30 mCi), resulting in a final soln. with a pH value of 4.5-5.0. [Tc-99m]TRODAT-1, prepd. by this new kit, was stable at room temp. for 6 h. Biodistribution studies of this agent in rats with the new formulation showed similar regional brain distribution as compared with those obtained with the previous prepn. (high striatum-to-cerebellum ratio). In conclusion, using this lyophilized one-vial kit formulation, [Tc-99m]TRODAT-1 can be prepd. with greater than 90% radiochem. purity. This simplified kit will significantly improve the reliability of prepn. of this agent for routine clin. use.
IT 7772-99-8, Stannous chloride, reactions
RL: RCT (Reactant)
(effect of reaction conditions on [Tc-99m]TRODAT-1 yield using improved kit formulation)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RE.CNT 24
RE
(1) Abi-Dargham, A; J Nucl Med 1996, V37, P1129 HCAPLUS
(2) Booij, J; Eur J Nucl Med 1998, V25, P24 HCAPLUS
(3) Fischman, A; Synapse 1998, V29, P128 HCAPLUS
(4) Fujita, M; Eur J Nucl Med 1997, V24, P403 HCAPLUS
(5) Goodman, M; J Med Chem 1994, V37, P1535 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l31 7

L31 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:700411 HCAPLUS
DN 132:83613
TI Development of a lyophilized kit formulation for labeling of DNA probes with 99mTc
AU Hjelstuen, O. K.; Saetern, A. M.; Tonnesen, H. H.; Bremer, P. O.; Verbruggen, A. M.
CS Department of Pharmaceutics, University of Oslo, Oslo, 0316, Norway
SO Int. J. Pharm. (1999), 190(2), 197-205
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English
AB DNA fragments such as oligodeoxynucleotides (ODNs) are under investigation for a possible utilization in nuclear medicine. Until now, expts. on 99mTc-labeled ODNs in vitro or in vivo have required the application of time-consuming procedures to obtain and control the purity of the radiolabeled compd. A lyophilized labeling kit would ease and improve the reproducibility in further investigations with this class of promising biomols.; therefore a study was initiated to evaluate the suitability of conjugates of ODNs and a bifunctional chelating agent to be part of lyophilized kit formulations. We report here the development of the first kit for one-step labeling of oligonucleotides with 99mTc. The formulation comprises 250-500 pmol S-benzoyl-mercaptoacetyldiglycine (MAG2)-ODN phosphorothioate conjugate, 5 mg potassium sodium tartrate tetrahydrate and 100 .mu.g stannous chloride dihydrate in a lyophilized kit. Labeling yields above 90% were reproducibly achieved after addn. of 0.1-1 GBq pertechnetate and subsequent heating in a boiling water bath. Once formed, the 99mTc-MAG2-ODN complexes were stable for at least 24 h. The shelf life of the kits is at least 10 wk when stored protected from light at room temp., but even kits stored at 40.degree.C gave labeling yields above 90% after 10 wk.
IT 7772-99-8, Stannous chloride, uses
RL: CAT (Catalyst use); USES (Uses)
(development of a lyophilized kit formulation for labeling of DNA probes with 99mTc)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RE.CNT 21
RE
(3) de Kieviet, W; J Nucl Med 1981, V22, P703 HCAPLUS
(4) Dewanjee, M; J Nucl Med 1994, V35, P1054 HCAPLUS
(6) Fischman, A; J Nucl Med 1993, V34, P2253 HCAPLUS
(7) Griffiths, G; Bioconjugate Chem 1992, V3, P91 HCAPLUS
(9) Hjelstuen, O; J Labelled Compd Radiopharm 1999, V42, P737 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l31 6

L31 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:708421 HCAPLUS
DN 131:327612
TI Technetium-99m radiolabelled diethylene triamine pentaacetic acid diester and process for the preparation of technetium-99m diethylene triamine penta-acetic acid diester
IN Chatterjee, Mita; Sen, Karabi; Banerjee, Some Nath
PA Council of Scientific and Industrial Research, India
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 953360	A1	19991103	EP 1998-250102	19980324

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

AB The present invention relates a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders. Accordingly, the present invention provides a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders wherein technetium-99m diethylene triamine pentaacetic acid di-Me ester has Rf value = zero in silica gel/acetone TLC system and Rf value = 1 in silica gel/acetonitrile water (1:1) TLC system and technetium-99m diethylene triamine pentaacetic acid di-Me ester movement is of the order of half of the distance as compared to the std. compd. (technetium-99m diethylene triamine pentaacetic acid) on conducting paper electrophoresis. The process for the prepn. of a technetium-99m radiolabeled diethylene triamine pentaacetic acid diester kit for the diagnosis of renal disorders comprises: (a) Adding appropriate amt. of stannous ion to a dil. aq. soln. of diethylene triamine pentaacetic diester prepd. by known methods (b) Keeping the resultant soln. obtained in step (a) in an evacuated rubber sealed injection vial flushed with nitrogen; (c) lyophilizing the said kit and storing the lyophilized product an obtained in step (b) at 4.degree.C; (d) radiolabelling the said lyophilized product with Tc-99m by allowing the kit to attain the room temp. before addn. of 99m TcO4; (e) shaking the kit vigorously to obtain the radiolabeled product available for use within a period of an hour.

IT 7772-99-8, Stannous chloride, reactions 22541-90-8, Stannous ion, reactions
RL: RCT (Reactant)
(prepn. of 99mTc-labeled DTPA diester kits for renal scintigraphy)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

RE.CNT 4
RE
(1) Amersham Internationalplc; EP 0089143 A 1983 HCAPLUS
(2) Guilmette, R; JOURNAL OF PHARMACEUTICAL SCIENCES 1979, V68(2), P194 HCAPLUS
(3) Jurisson, S; CHEMICAL REVIEWS 1993, V93(3), P1137 HCAPLUS
(4) New Salutar Inc; WO 8602005 A 1986 HCAPLUS

=> d bib abs hitstr l31 2

L31 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:346652 HCAPLUS
DN 133:79197
TI A freeze dried kit for 99mTc(V) dimercaptosuccinic acid
AU Mushtaq, A.; Pervez, Sh.; Haider, I.; Mansur, M. S.; Jehangir, M.
CS Radioisotope Production Group, Nuclear Chemistry Division, Pakistan Institute of Nuclear Science and Technology, Islamabad, Pak.
SO J. Radioanal. Nucl. Chem. (2000), 243(3), 827-829
CODEN: JRNCDM; ISSN: 0236-5731
PB Kluwer Academic Publishers
DT Journal
LA English
AB 99mTc pentavalent dimercaptosuccinic acid [99mTc(V) DMSA], a useful agent for imaging thyroid medullary carcinoma and other tumors can be reliably prepd. by addn. of Na99mTcO4 to a freeze-dried mixt. of DMSA and Sn (2:1 molar ratio). The radiochem. purity, stability and animal bio-distribution behavior is similar to that of the agent made by addn. of NaHCO3 to DMSA (III) renal imaging freeze-dried kit.
IT 7772-99-8, Stannous chloride, reactions
RL: RCT (Reactant)
(freeze dried kit for 99mTc(V) dimercaptosuccinic acid)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RE.CNT 7
RE
(1) Chauhan, U; Nucl Med Biol 1992, V19, P825 HCAPLUS
(2) Ikeda, I; Intern J Appl Radiation Isotopes 1976, V27, P681 HCAPLUS
(5) Washburn, L; Nucl Med Biol 1995, V22, P689 HCAPLUS
(6) Watkinson, J; J Nucl Med 1989, V30, P174 MEDLINE
(7) Westera, G; Intern J Appl Radiation Isotopes 1985, V36, P311 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l31 3

L31 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:272374 HCAPLUS
Correction of: 1997:211786
DN 132:262169
Correction of: 126:274207
TI Study on the lyophilized product of 186Re(Sn)-HEDP kit
AU Bai, Hongsheng; Jin, Xiaohai; Wang, Fan; Du, Jin; Liu, Yuemin; Chen, Daming; Xu, Hailin
CS China Institute of Atomic Energy, Beijing, 102413, Peop. Rep. China
SO Tongweisu (1996), 9(4), 207-212
CODEN: TONGEM; ISSN: 1000-7512
PB Yuanzineng Chubanshe
DT Journal
LA Chinese
AB The prepn. of the frozen and dried product of 186Re(Sn)-HEDP kit was introduced, and the effective quantities of the components (HEDP, vitamin C and SnCl2.2H2O) in the kit were detd. At the same time, the effects of reaction time, temp. on the labeling efficiency and animal distribution were systematically studied. The initial animal expts. showed high uptake in the skeletal tissue and quick clearance in the blood.
IT 10025-69-1, Stannous dichloride dihydrate
RL: MSC (Miscellaneous)
(lyophilized product of 186Re(Sn)-HEDP kit)
RN 10025-69-1 HCAPLUS
CN Tin chloride (SnCl2), dihydrate (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

●2 H_2O

=> d bib abs hitstr l31 1

L31 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:433275 HCAPLUS
DN 133:48872
TI Methods for radionuclide-labeling of biomolecules and kits utilizing the same
IN Gargan, Paul E.; Scheu, John D.
PA American Biogenetic Sciences, Inc., USA
SO U.S., 11 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6080384	A	20000627	US 1997-827013	19970325

AB Novel methods for radiolabeling sulfhydryl group-bearing biomols., novel compns. useful for radiolabeling sulfhydryl group-bearing biomols., kits comprising such novel compns. and methods for imaging mammalian, preferably human, tissue employing radiolabeled biomols. are described. The methods, compns. and kits of the present invention are useful for labeling sulfhydryl group-bearing biomols. such as whole mol. proteins, protein fragments or peptides, in particular, monoclonal or polyclonal antibodies, and esp., antifibrin MH1 monoclonal antibody.
IT 7772-99-8, Stannous chloride, biological studies 7783-47-3, Stannous fluoride 10031-24-0, Stannous bromide 10294-70-9, Stannous iodide 22541-90-8D, Stannous ion, salts, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods, compns. and kits for radiolabeling sulfhydryl group-bearing biomols. for imaging)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

RN 10031-24-0 HCAPLUS
CN Tin bromide (SnBr2) (6CI, 8CI, 9CI) (CA INDEX NAME)

Br—Sn—Br

RN 10294-70-9 HCAPLUS
CN Tin iodide (SnI2) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

I—Sn—I

RN 22541-90-8 HCAPLUS
CN Tin, ion (Sn2+) (8CI, 9CI) (CA INDEX NAME)

Sn^{2+}

RE.CNT 55
RE
(1) Anon; WO 8503231 1985 HCAPLUS
(2) Anon; EP 0237150 1987 HCAPLUS
(3) Anon; WO 8704164 1987 HCAPLUS
(4) Anon; EP 0271806 1988 HCAPLUS
(5) Anon; WO 8807382 1988 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr l30 1

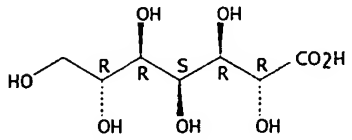
L30 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1993:45762 HCAPLUS
DN 118:45762
TI Radiopharmaceutical bacteriostats
IN Flanagan, Richard J.; Tartaglia, Daniel
PA Merck Frosst Canada Inc., Can.
SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 508724	A1	19921014	EP 1992-303074	19920407
	EP 508724	B1	19960807		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	US 5093105	A	19920303	US 1991-682170	19910409
	US 5227152	A	19930713	US 1991-806572	19911212
	US 5306482	A	19940426	US 1992-841281	19920303
PRAI	US 1991-682170	19910409			
	US 1991-806572	19911212			
	US 1992-841281	19920303			

AB Benzalkonium chlorides and benzethonium chlorides are useful as bacteriostatic agents in radiopharmaceutical prepns. contg. a 99mTc compd. or a radioactive iodine compd. A lyophilized radiopharmaceutical vial contained imidodiphosphonate 10, SnCl2.cntdot.2H2O 1, p-aminobenzoic acid 2mg, and benzalkonium chloride 25.mu.g. The vial was reconstituted with 500 mCi of pertechnetate 99mTc of normal saline; radiochromatog. tests showed <.perp.% free pertechnetate and <1% hydrolyzed pertechnetate at 7h post-reconstitution.

IT 87-74-1D, D-glycero-D-gulo-Heptonic acid, technetium-99 complexes
RL: BIOL (Biological study)
(metastable, radiopharmaceutical, bacteriostats for, benzalkonium chlorides and benzethonium chlorides as)
RN 87-74-1 HCAPLUS
CN D-glycero-D-gulo-Heptonic acid (6CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 7772-99-8P, Stannous chloride, preparation
RL: PREP (Preparation)
(technetium-99m-based radiopharmaceuticals contg., as reducing agent)
RN 7772-99-8 HCAPLUS
CN Tin chloride (SnCl2) (8CI, 9CI) (CA INDEX NAME)

Cl–Sn–Cl

=> d bib abs hitstr l30 2

L30 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1986:438796 HCAPLUS
DN 105:38796
TI Ulcer detection
IN Kuperus, John
PA Medi Nuclear Corp., Inc., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4581221	A	19860408	US 1983-527188	19830829

AB A suitable water-sol. carrier is reacted at a predetd. pH with 99mTc and the resulting reagent is combined with a known ulcer-specific compd. to produce an ulcer-detecting agent. When ingested, the ulcer-specific compd. selectively attaches through binding or pptn. to ulcerous tissue in the gastrointestinal tract. The unattached Tc-labeled material clears the stomach after a period of time, leaving the ulcer-specific compd. present only at the ulcer sites. The quantity of labeled ulcer-specific compd. is very small, so that clearing is accomplished rapidly and the ulcer sites are clearly defined. The 99mTc is detected in the digestive tract by conventional radioimaging procedures. Thus, an ulcer diagnosis kit contg. a protein carrier, a reducing agent, and ulcer-specific compd. was prepd. from $SnCl_2.2H_2O$ 10 mg, 25% human serum albumin 0.4 mL, 0.1N HCl 5 mL, 1.2N acetate buffer (pH 5.5) 2 mL, water 80 mL, and Na lactose sulfate (ulcer-specific compd.) 150 mg. The resulting soln. was purged with N_2, dispensed in vials, lyophilized, and sealed. The sealed vials are opened at the site of use and mixed with $Na^{99m}TcO_4$. The admixt. may then be ingested by the patient.

IT 7772-99-8, biological studies 7783-47-3
RL: ANST (Analytical study)
(technetium-99-labeled ulcer-detecting agent contg., metastable)

RN 7772-99-8 HCAPLUS
CN Tin chloride ($SnCl_2$) (8CI, 9CI) (CA INDEX NAME)

Cl—Sn—Cl

RN 7783-47-3 HCAPLUS
CN Tin fluoride (SnF_2) (8CI, 9CI) (CA INDEX NAME)

F—Sn—F

1st search

CEPERLEY 09/576,960

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=> d his

     (FILE 'HOME' ENTERED AT 16:40:39 ON 11 MAR 2001)

     FILE 'HCAPLUS' ENTERED AT 16:40:49 ON 11 MAR 2001
               E DYSZLEWSKI/AU
L1             7 S E6-7
L2            17 S PIPES D?/AU
L3           151 S WEBB E?/AU
L4             0 S L1 AND L2 AND L3
L5           175 S L1-3
L6           500 S ?AMINOPOLYCARBOXYLAT?
L7          5979 S STANNOUS
L8        161227 S TC OR RE
L9             1 S L5 AND L6
L10            3 S L5 AND L7
L11            5 S L8 AND L5
L12        35181 S ?TECHNETIUM? OR ?RHENIUM?
L13       381741 S MANGANESE OR MN
L14           15 S L5 AND L12-13
L15       124306 S CARBONYL
L16           16 S L9-11 OR L14
L17            0 S L16 AND L15
L18            3 S L7 AND L16
L19           11 S L14 AND COMPLEX?
L20        37844 S ?DENTATE?
L21            3 S L20 AND L16
L22           12 S L18-19 OR L21
L23            4 S L16 NOT L22
               SELECT RN L22 1-12

     FILE 'REGISTRY' ENTERED AT 16:49:41 ON 11 MAR 2001
L24          200 S E1-200
L25           62 S E201-262

     FILE 'HCAPLUS' ENTERED AT 16:50:30 ON 11 MAR 2001
L26           12 S L24-25 AND L22
               SELECT RN L23 1-4

     FILE 'REGISTRY' ENTERED AT 16:55:18 ON 11 MAR 2001
L27           57 S E263-319

     FILE 'HCAPLUS' ENTERED AT 16:55:33 ON 11 MAR 2001
L28            4 S L23 AND L27

     FILE 'REGISTRY' ENTERED AT 17:00:03 ON 11 MAR 2001
L29              STR 163932-31-8
L30            8 S L29

     FILE 'HCAPLUS' ENTERED AT 17:06:07 ON 11 MAR 2001
               SAVE L16 CEP960I/A

     FILE 'REGISTRY' ENTERED AT 17:21:44 ON 11 MAR 2001
L31            1 S 14333-13-2
L32            1 S 87552-16-7
L33            1 S 87552-16-7
L34            1 S 23288-61-1
L35            1 S 163932-31-8
               E C3H6O6MN/MF
               E C3H6O6RE/MF
L36            3 S E3
               E C3H6O6TC/MF
L37            2 S E3-4
     FILE 'HCAPLUS' ENTERED AT 17:26:38 ON 11 MAR 2001
L38           17 S L35 OR L37
L39            5 S L36
L40            2 S L39(L)PREP/RL
L41            2 S L40 NOT L16
L42         2028 S L31-35
L43            1 S L41 AND L42
L44           17 S L42 AND L38
L45            9 S L38(L)PREP/RL
L46            9 S L44 AND L45
L47            8 S L46 NOT L16
L48            8 S L44 NOT L46
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Considered 06/29/01 MEC

inventor search

12 cites of 262 cpds displayed

4 cites of 57 cpds displayed

L31 → MnO_4

L32 → $^{186}ReO_4$

L35 → $^{99}Tc(CO)_3(OH_2)_3$

L36 → various salts, etc of $Re(CO)_3(OH_2)_3$

L37 ← $Tc(CO)_3(OH_2)_3$

there does not seem to be a $Mn(CO)_3(OH_2)_3$ cpd

L38 ← $Tc(CO)_3(OH_2)_3$ 17 documents

5 cites for $Re(CO)_3(OH_2)_3$ — all cites for the CO complex i.e. claims 1 & 8 are covered here since the $M(CO)_3(OH_2)_3$ cpds are both product (cl 1) & reactant (cl 8)

2 cites for prep

8 cites (relevant cites)

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L49          37 S L6 AND L12-13
L50          36 S L49 NOT L38
L51          36 S L50 NOT L16

     FILE 'REGISTRY' ENTERED AT 17:44:49 ON 11 MAR 2001
L52           1 S EDTA/CN
L53           1 S DTPA/CN
L54           1 S DOTA/CN
L55           3 S IDA/CN
L56           0 S  "GLYCINE, N-(CARBOXYMETHYL)"/CN
                E  "GLYCINE, N-(CARBOXYMETHYL)"/CN
L57           1 S E4
L58           2 S NTA/CN
L59           1 S "GLYCINE, N,N-BIS(CARBOXYMETHYL)-"/CN

     FILE 'HCAPLUS' ENTERED AT 17:47:08 ON 11 MAR 2001
L60       25057 S L52-54 OR L57 OR L59
L61           8 S L60 AND L51
L62          28 S L51 NOT L61
L63           0 S L62 AND (CARBON MONOXIDE OR CARBONYL)
                SELECT RN L62 1-28
L64          27 S L6(L)L12-13
L65          33 S L64 OR L62
                DELETE SELECT
                SELECT RN L65 1-33

     FILE 'REGISTRY' ENTERED AT 17:55:08 ON 11 MAR 2001
L66         201 S E1-200
L67         200 S E201-400
L68         200 S E401-600
L69         164 S E601-764
L70          44 S L66-69 AND (TC OR MN OR RE)/ELS
L71          33 S L70 AND (N AND C AND O)/ELS
L72          11 S L70 NOT L71

     FILE 'HCAPLUS' ENTERED AT 17:58:50 ON 11 MAR 2001
L73         244 S L71
L74          19 S L73 AND L65
L75          14 S L65 NOT L74
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searching out amino carboxylate species (AC)

8 cites → looking for making Mn, Tc or Re complexes w/ AC, in general

more general search for claimed metals w/ any amino carboxylate species

33 of the cpds in L66-69 have claimed metals & amino carboxylate ligand

very general – most complexes lack the C≡O ligands